

DOCUMENT RESUME

ED 137 906

95

EA 009 374

AUTHOR Schmuck, Patricia; And Others
TITLE Management Implications of Team Teaching.
INSTITUTION Oregon Univ., Eugene. Center for Educational Policy and Management.
SPONS AGENCY National Inst. of Education (DHEW), Washington, D.C.
PUB DATE 77
NOTE 97p.; Photos and charts may not reproduce clearly
EDRS PRICE MF-\$0.83 HC-\$4.67 Plus Postage.
DESCRIPTORS *Communication (Thought Transfer); *Decision Making; Educational Innovation; Elementary Education; Experimental Programs; Job Satisfaction; Management; *Multiunit Schools; Open Education; Open Plan Schools; Organization; *Program Descriptions; School Organization; Teacher Attitudes; *Teacher Behavior; Teachers; *Team Teaching
IDENTIFIERS *Management Implications of Team Teaching

ABSTRACT

This project, Management Implications of Team Teaching (MITT), was created to further develop the existing knowledge about team teaching. Studies completed in the early 1970s left two important research questions unanswered: (1) Do teachers' behaviors and attitudes change after team teaching is implemented? (2) Do the changes endure over time? Launched in 1973, the project involved 38 schools from five states. The schools agreed to provide extensive data at five different times over two and one-half years. Some of these schools had installed multiunit organization (which includes team teaching), while other schools were organized in a conventional manner. It was found that the installation of a unit or team-teaching organization had significant effects--teaming of teachers occurred more frequently, communication among teachers was greater, and teacher groups were more involved in making decisions about school and classroom matters. No differences were found in teachers' attitudes about their work or careers. Further work will be done in this area. It is hoped that the information gained from this research will help educators better understand the consequences of choosing between a unit and a conventional organizational structure. (Author/IRT)

* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *

Management Implications of Team Teaching

Patricia Schmuck,
Susan Paddock,
and John Packard

BEST COPY AVAILABLE

Project MITT
Center for Educational Policy
and Management
University of Oregon
1472 Kincaid
Eugene, Oregon 97401

The University of Oregon is a member of the Oregon State System of Higher Education. It is the policy of the University of Oregon that discrimination based on race, color, religion, sex, age, handicap, or national origin shall not exist in the University. This policy is intended to implement the requirements of EO 11246, EO 11375, Title IX of the Education Amendments of 1972 and Section 503 of the Vocational Rehabilitation Act of 1973. This policy applies to all aspects of employment, admission, education and facilities. Information concerning these policies and their implementation may be obtained from Myra T. Willard, Director, Office of Affirmative Action, Room 465, Oregon Hall, University of Oregon, Eugene, Oregon 97403. Telephone 503-686-3123.

The Center for Educational Policy and Management (CEPM) at the University of Oregon is supported in part by funds from the National Institute of Education (NIE). The Center employs authorities from a variety of professional fields who are encouraged to express freely their views on various subjects. Any opinions expressed in this publication, therefore, do not necessarily reflect those of the Center, nor do they necessarily represent the policies or positions of the National Institute of Education. No official endorsement, therefore, should be inferred from any of these organizations.

Contents

Chapter 1: The Organization of Schools, page 6
Chapter 2: The MITT Story, page 14
Chapter 3: MITT Findings, Units and Team Teaching, page 20
Chapter 4: Related Findings: Communication, Decision Making and Teacher Attitudes, page 32
Chapter 5: Variations in Team Teaching Among Experimental Schools, page 48
Chapter 6: The Living School, page 60
Chapter 7: A Question of Choice, page 78
Project MITT Bibliography, page 86
References, page 88
Participating Schools, page 90
MITT Field Representatives, page 92
Project MITT Staff, page 94

Preface

4

This project, Management Implications of Team Teaching (MITT), was created to develop further the existing knowledge about team teaching. The primary question asked by MITT was, "Do elementary school teachers engage in different work patterns and exhibit different attitudes after they have been organized into teaching teams?"

Research builds upon the findings of two major studies that reached remarkably similar conclusions about the effects of school organization on elementary teachers' influence over educational affairs and on their level of work satisfaction. The findings were all the more remarkable because the studies were conducted independently of each other. One study, conducted by Roland Pellegrin (1970)* at the University of Oregon, compared four multi-unit schools and four conventional

* Pellegrin, Roland J., *Some Organizational Characteristics of Multiunit Schools*, Technical Report No. 8, Center for the Advanced Study of Educational Administration, May, 1970.

schools in the same districts. The second study, conducted by John Meyer and Elizabeth Cohen (1971)** at Stanford University Center for Research and Development in Teaching, compared teachers' attitudes and work patterns in eight open-space schools with those in seven conventional schools. Despite differences in the way variables were measured, both studies showed teachers in the multi-unit and open-space schools to be different from their counterparts in conventional schools in several ways. Teachers in multi-unit and open-space schools talked to each other more about classroom affairs, were more involved

** Meyer, John, and Cohen, Elizabeth, *The Impact of the Open-Space School Upon Teacher Influence and Autonomy: The Effects of an Organizational Innovation*, Technical Report No. 21, Stanford Center for Research and Development in Teaching, 1971.

in decisions about instruction and curriculum, felt more influential in decisions about school matters and expressed higher satisfaction with their work than did teachers in conventional schools.

These studies have been cited as lending empirical support for establishing a unit organization in elementary schools. *If* the findings were viewed as conclusive, and *if* equivalent models of unit structure were adopted widely, both the organizational character of the public elementary school and the nature of teaching could be altered profoundly.

We believed that such significant research findings deserved careful scrutiny because they carried the implied authority of empirical research. Because the findings warranted further investigation in order to affirm their generalizability and because a number of perplexing questions were not sufficiently answered by previous research, Project MITT was begun.

With funds provided by the National Institute of Education and

support from the Center for Educational Policy and Management (CEPM), the Project was launched in 1973. Thirty-eight schools from five states representing 15 school districts agreed to provide extensive data at five different times over two and one-half years. Some of these schools had installed unit organization; other schools were organized in a conventional manner.

We found that the installation of a unit or team-teaching organization had significant effects; teaming occurred more frequently among teachers, communication among teachers was greater and teacher groups were more involved in making decisions about school and classroom matters. No differences have been found, however, in teachers' attitudes about their work or careers. Installation of a unit structure altered the work setting of elementary school teachers, but did not appear to have altered how teachers felt about their work. We are still

investigating this latter finding; a full report will be available in 1977.

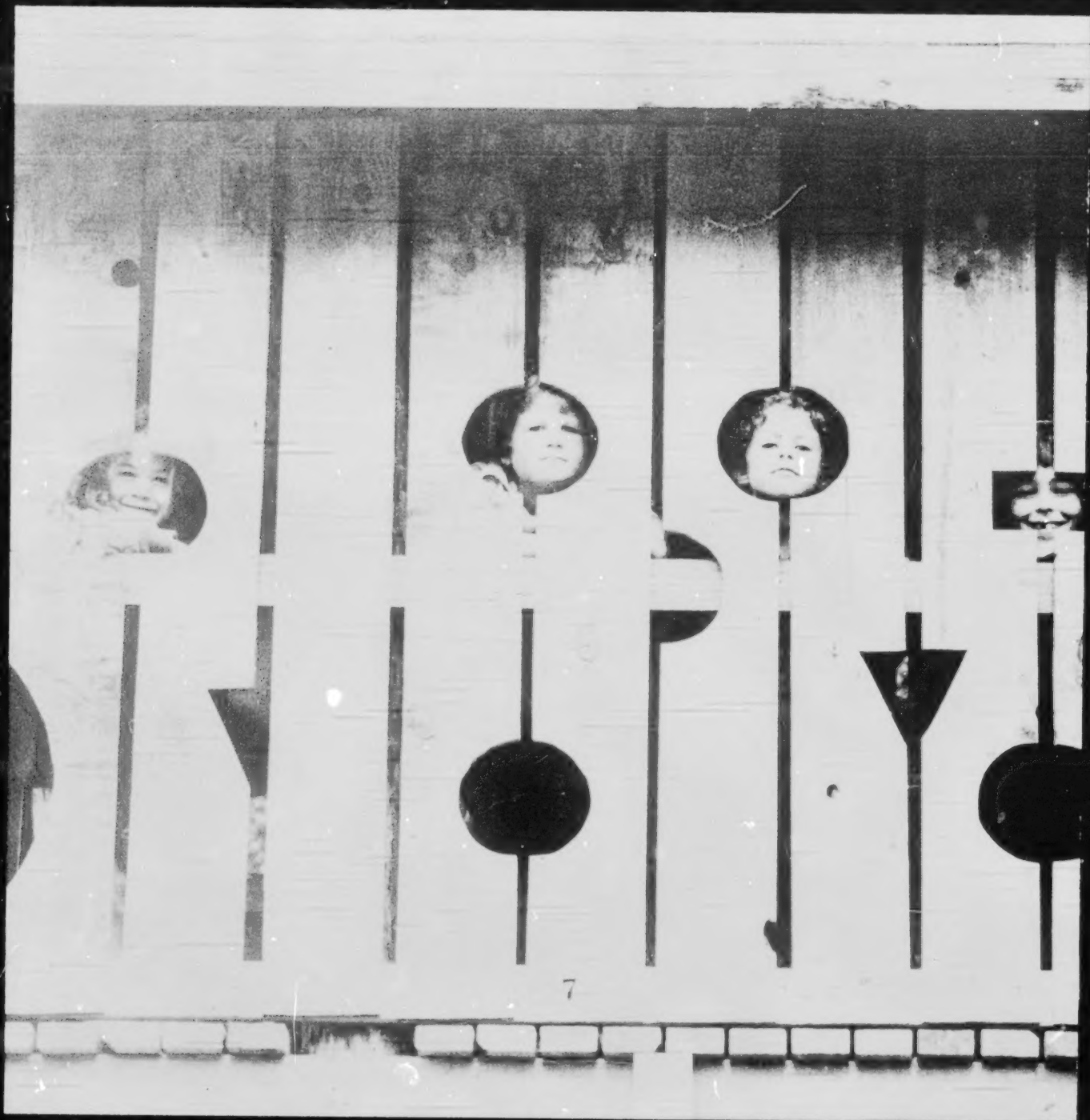
We hope the information gained from our research and reported here will help educators better understand the consequences of choosing between a unit and a conventional organizational structure. We are especially indebted to the many teachers and administrators who made this research possible. We hope this book serves them well.

Patricia Schmuck

Susan Paddock

John Packard

Eugene, Oregon 1977



Chapter 1

The Organization of Schools

Schools in a Changing Environment

8 Project MITT's major focus has been to investigate how the organization of an elementary school affects the work and attitudes of teachers. This was not a new question. Indeed, the study of how humans organize has been a topic addressed by novelists, philosophers, poets, political leaders, social scientists and educators alike. Clearly, many efforts to change and improve education directly involve reorganizing the way schools are structured.

Schools are important institutions; how they are organized can have direct and profound implications for the education of our citizenry. Schools are deliberately organized and continually reorganized to face the needs of a changing society. In this century, massive social changes have significantly influenced restructuring of the work patterns in schools.

Schools are sensitive to changes in their environment, and like other institutions, schools continually adapt to those changes. Schools are, perhaps, more sensitive than other organizations: students represent different subgroups within a community and communicate daily between the school and the homes from which they come; schools are economically dependent on the local community; and legal control of the school district is vested in lay members of the community. As a changing environment directly affects all organizations, so have certain social changes affected the restructuring of elementary schools.

Early schools were structured so as to educate large numbers of students with small numbers of teachers. The most efficient strategy was having one teacher available to many students during designated time periods. In rural areas one teacher conducted grade-level activities for all students; in urban centers with larger populations, teachers were organized into self-contained age-graded classrooms inside the familiar egg-crate physical plant. Teaching identical basic skills to same-age students at the same time was an efficient answer to the public's demand

to educate an unschooled clientele.

As the needs and demands of society have changed, so have school structures altered. The self-contained classroom organization is giving way to new forms of organization to accommodate contemporary problems, contemporary needs and contemporary students. As the world has become more complex, so have demands on schools. Three specific social changes are associated with the restructuring of work to enable more collaboration between and among teachers. They are: (1) the transition from work settings of small businesses and farms to highly industrialized and bureaucratic work settings, (2) the rapid advance of social and scientific technology, and (3) the rising knowledge about the technology of teaching, resulting in increased specialization of work.

Changes in the Work Setting

When this was a new nation, autonomy, individualism, hard work and self-control represented the values of the agrarian pioneer society. The sociologist David Reisman, in his book *The Lonely Crowd*, described the typical character type of this period as "inner directed." Reisman portrayed a steadfast and dogmatic people for whom the judgments of others were not very important. Individuals knew what was "true and virtuous" and were prepared to act accordingly.

America's classrooms mirrored the norms of this era. The teacher assumed all authority, prescribing rote learning and hours of tedious study to teach the virtues of hard work and self-control. While in many rural schools the teacher was the sole adult occupant, even in urban centers teachers worked alone. Each teacher took sole responsibility for same-age students in self-contained classrooms.

As industrialization and urbanization flourished in the early twentieth century, organizations and communi-

ties grew rapidly. People migrated to cities and took jobs in ever-enlarging organizations. These growing organizations demanded new kinds of responses; earlier themes of individualism and competitiveness were modified to include concepts of accommodation, smooth working relationships and responsibility toward others. Cooperation, conformity and adjustment began to replace the earlier virtues of hard work, individualism and competition.

Changes were also occurring in schools. Like other institutions in the society, schools grew into large bureaucracies. Small districts were consolidated into larger ones. Schools emphasized accommodation, smooth working relationships and interpersonal sensitivity. Teachers became concerned about students' psychological adjustment as well as their academic progress and began to share responsibility for student progress with other adult professionals. Norms about teaching had changed; teachers were no longer isolated, independent authorities; teachers relied on the knowledge and skills of others. New behaviors demanded by growing social organizations were important antecedents to the adoption of team teaching practices.

Changes in Level of Technology and Knowledge

9

As social and scientific technology advanced, "generation gap" became a popular phrase to indicate the radical life changes among age groups. Space-age students with pocket calculators were taught by teachers who remembered a childhood without television. As knowledge grew rapidly, it became impossible to view any one teacher as the "ultimate authority" on every subject. School districts grew in their capacity to house their own experts in various curricular areas. Teachers were no longer isolated in their own classrooms, solely responsible to themselves and to their students. They had consultants, in-service workshops and expert curriculum advisors. The growth of technology played an instrumental part in breaking down the four walls of the self-contained classroom by placing educators in continual contact with each other.



Team Teaching as a Response to a Changing Society

Changes in the Specialization of Functions

As social and scientific knowledge expanded, so did the need for specialization. Earlier methods of mass instruction in basic skills gave way to more attention to individualizing instruction. Recognition of different rates and styles of learning prompted the development of increased specialization. Psychometrics, special education programs, remedial programs and special interest programs were examples of what replaced the earlier style of identical mass instruction. As a result, schools became increasingly complex organizations housing a variety of experts. This greater complexity required new procedures for communicating among teachers, administrators and specialists as well as new procedures for the



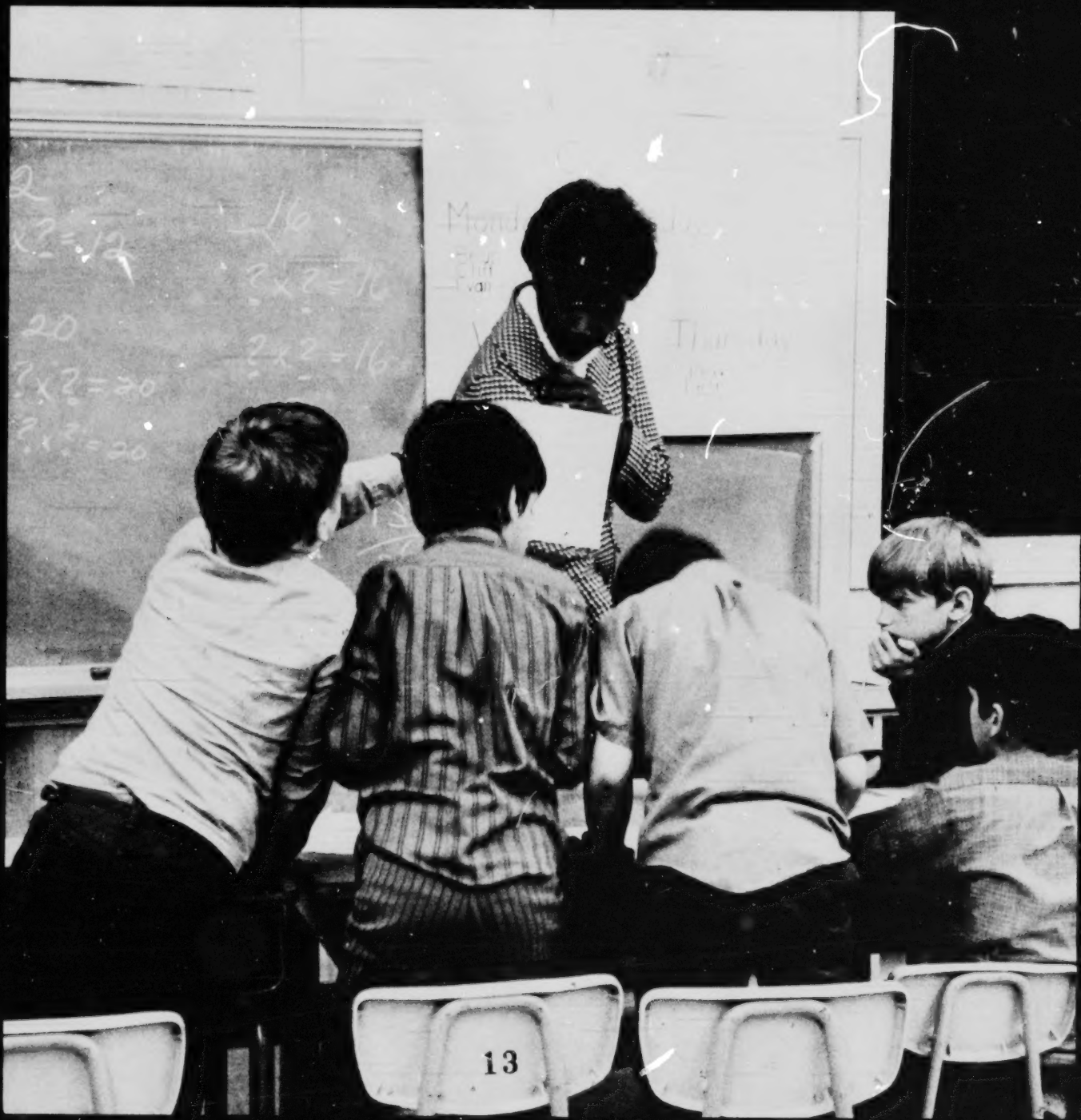
coordination of their functions. The individual autonomy of earlier days was exchanged for norms of sharing knowledge and information.

Increased bureaucracy, the rise of social and scientific technology, the advance of knowledge about teaching and learning and increased specialization of educators have acted as important forces to change the structure of schools. Even physical characteristics of school buildings reflect these social changes. More and more elementary schools are built with open spaces for flexible groupings of students and for increased interactions among teachers and specialists.

Project MITT has focused on one specific type of school change—the movement of teachers from the isolation of self-contained classrooms toward sharing responsibilities for students. Social forces which have acted to reshape the elementary school are apparent in the history of team teaching. While today there are many different versions of team teaching, two basic types stand out as fundamental. The first focuses on the efficient organization of staff resources, such as differentiated staffing or the multi-unit or unitized organizational structure. In the second, teaming plans have been developed primarily as means to improve learning through flexible grouping of students.

Much of the research on team teaching has been less than complete because of the failure of investigators to define the concept clearly. Thus, the

11



first task of Project MITT was to formulate a definition of team teaching which was broad enough to include the variety of existing definitions, yet specific enough to be measured directly.

Project MITT has defined team teaching as follows: *Team teaching occurs when two or more teachers have responsibility for the same students in the same subject at, or about, the same time.*

Plans for differentiated staffing, multi-unit or unit organization or even schools officially organized into self-contained classrooms may have shown evidence of teaming. The basic research procedure was to look at the organization of a school (unit versus conventional) and to see if the organizational arrangement affects the occurrence of team teaching.

A unit school is one in which permanent and official teacher work groups have been created. A conventional school is one which does not have official teacher work groups. Project

MITT's assumption was that although schools may make organizational changes, these changes do not necessarily ensure subsequent behavior changes among teachers. The task of Project MITT was to discover whether the work patterns of teachers were altered by changes in the organization of the school. In the following chapter, the processes by which answers were sought to this fundamental question will be described.



Chapter 2

The MITT Story

MITT Research Design

16 Research typically begins where previous research left off. So was the case with Project MITT. The studies completed in the early 1970's left two important research questions unanswered:

1. Do teacher behaviors and attitudes change after units are installed?
2. Do the changes endure over time?

Project MITT tried to answer those two research concerns by collecting data from schools prior to the installation of units and by extending data collections over an additional two years to observe what happened in those schools over time.

Most educational research collects data about the effects of a school innovation at one time only. The "one-shot only" research design is illustrated thus:

X	O
Innovation Occurs	Observation of the Effects of the Innovation

Of course, such a procedure is the simplest and the least expensive of all research designs. Conclusions reached using this procedure are, however, comparatively unreliable because there are no measures prior to the innovation, no measures over time, and no comparison measures. The Meyer and Cohen and Pellegrin studies were, however, more sophisticated than the above design. They included comparison measures between unit schools and conventional schools. Such a research design is illustrated thus:

Experimental Schools	X	O ₁
Control Schools		O ₂
	Innovation Occurs	Observation of the Effects of the Innovation

Using this design gives researchers more confidence in their findings. Yet, because there are no "before" measures, researchers cannot know whether the experimental group differed from the control group in the beginning. For instance, perhaps some schools installed a unit structure after teachers had voluntarily moved into team teaching. Because there are no "before" measures, researchers cannot be certain of the order of change.

To eliminate some of the problems in previous research, the MITT research design collected data prior to the installation of units and then afterward for two more years in both experimental and control schools. The MITT research design is illustrated by the following:

Carrying Out the Research Design

Experimental Schools	O	X	O	O	O	O
Control Schools	O		O	O	O	O
	T ₁		T ₂	T ₃	T ₄	T ₅
Data Collection, Spring 1974						
Installation of Units in "Experimental Schools," Fall 1974						
Data Collection, Fall 1974						
Data Collection, Spring 1975						
Data Collection, Fall 1975						
Data Collection, Spring 1976						

In 1972, John Packard, Sandy Charters and Dick Carlson of The Center for Educational Policy and Management wrote a proposal to the National Institute of Education which was approved and funded. Dick Moser joined the staff to implement the research design in the field. A full conceptual scheme and scope of work was outlined in the 1973 Prospectus for work.*

The first task was to select schools that would fit experimental and control group design categories. The more than 20,000 miles of travel and 500 long distance calls logged by project staff indicate the difficulty of locating schools that would be natural observation points. It was obvious that schools could not be randomly chosen, since the primary variable under study, unit structure, would be adopted voluntarily. It was also obvious that control schools would have to be comparable to experimental schools in location and in size so that differential

effects could be linked with certainty to the key variable, unit structure.

Preliminary explorations led to potential IGE (Individually Guided Education) schools spawned by the Wisconsin R & D Center. The prime component of an IGE school is a multi-unit structure. At the Annual Convention for Individually Guided Education in November, 1973, an overview of Project MITT was presented and primary contacts were made. Afterwards there were numerous follow-up conferences in 20 states where formal presentations were made on the costs and benefits of participation. After these conferences, staff members accepted invitations to specific school districts to discuss the project.

In addition to the experimental schools, the research plan also called for recruiting control schools. Control schools were those which would not be organized in units but which were

* Packard, J. S., R. O. Carlson, W. W. Charters, Jr., and R. H. Moser. *Management Implications of Team Teaching: Prospectus for Research: Research Allocation and Management Plan*. Center for Educational Policy and Management, University of Oregon, September 1973.



19

17

comparable to the experimental schools on other measures. Thus, an attempt was made to pair an experimental school with a control school from the same school district.

By late spring, 1974, cooperative agreements were signed with 43 schools. As a result of IGE's strength in the East, all of the MITT sample schools were east of the Mississippi River; the closest school was 2,000 miles from Project MITT headquarters in Oregon. Schools ranged in size from a faculty of eight serving 200 students to a faculty of 29 serving over 800 students. Grade organizations varied; several schools included the seventh and eighth grades, a few were essentially middle schools, and more than half offered kindergarten programs. Most of the schools had a traditional classroom-corridor architectural design, but a few were entirely

or partially arranged according to an open-space plan. Schools were variously situated with respect to neighborhoods; some were inner-city schools serving low-income families, others were in affluent and not-so-affluent suburbs, and still others were in rural America. Most were public schools, although six schools of a Roman Catholic diocese and two schools on an army base were included. Six Field Representatives assumed responsibility as liaisons and data collection agents in each geographic area. Their careful attention to detail over five different data collections and their important liaison services have been critical to the project's endeavors.

There were manifest uncertainties regarding the extent to which selected schools would fit the rigorous demands of the research design for the MITT study. As in all cases where rigorous research is conducted in real-life settings, some of those uncertainties turned into fact. Given the rigor of the design, it was estimated that sound inferences could be drawn should only half of the 43 schools unequivocally fit the design's requirements. Between

the signing of cooperative agreements in the spring and the opening of school in the fall of 1974, reality interceded and several schools were dropped for a variety of reasons. After various changes and discontinuances, 29 schools met the requirements of the research design: 16 experimental schools and 13 control schools. Every time data were collected, each school was paid \$100 which enabled purchases of library books, equipment and, in one case, a rug for the teachers' room. The final list of schools participating in the project is listed in Appendix 1.

The results of Project MITT's investigations are summarized in the following four chapters.



Chapter 3
MITT Findings:
Units and
Team Teaching

Measurement of Team Teaching

22

"But are they REALLY teaming?" is a question asked by those who doubt that teachers in a school which has unit structure are actually team teaching. The question deserves to be asked. It would be a serious mistake to assume that in schools which have created formal units teachers will *ipso facto* engage in team teaching. Project MITT data do indicate, however, that teachers are more apt to engage in team teaching when they are in a unit school. At the same time, it would also be a serious mistake to assume that people have the same concept of what constitutes team teaching. There are a variety of definitions among educators, lay people and researchers alike.

Project MITT, faced with this variety of definitions, established one broad enough to be inclusive and yet specific enough to be measured. The definition of team teaching used was: *Team teaching occurs when two or more teachers have responsibility for the same students in the same subject at, or about, the same time.*

The research aim was to see if the initiation of a unit structure would give rise to a greater incidence of team teaching.

The definition adopted by Project MITT distinguished between experimental and control schools. Teachers in experimental schools engaged in team teaching more often than did teachers in control schools. At the same time, data also showed that *all* teachers in schools with units did not become involved in team teaching. In those schools, some individual unit members maintained independence from their colleagues and did not engage in team teaching. Within the same schools there were also units which exhibited a high degree of team teaching while other units exhibited no evidence of team teaching. Indeed, many units fell considerably short of *bona fide* team teaching.

To measure the nature of teaching relationships, teachers were asked to keep records of the students they

taught in each of five core subjects. Data were tabulated from only classroom teachers. Personnel such as reading specialists, physical education and music teachers, paraprofessionals and interns were excluded. These records allowed analysis of the movements of students between teachers and gave information about the teaching relationships among teachers. The measure derived from this analysis was based upon the number of pairs of teachers who shared students.

Three types of teaching relationships emerged: *Self-Contained Teaching*; *Student Exchange Teaching*; and *Team Teaching*. They are illustrated in Figure 1.

Self-Contained Teaching refers to the traditional instructional organization of most American schools. Pupils are grouped into age-graded classes, to which a single teacher is assigned. That teacher teaches all curricular subjects to the class throughout the year. Except where subject specialists in music, art or physical education meet the class, no other teacher

Figure 1: Teaching Relationships Among Teachers

	Pupil	SS	Sc	Ma	Rd	LA		SS	Sc	Ma	Rd	LA
Type A: Self-Contained Teaching	1	●	●	●	●	●						
	2	●	●	●	●	●						
	3	●	●	●	●	●						
	4	●	●	●	●	●						
	5						●	●	●	●	●	●
	6						●	●	●	●	●	●
	7						●	●	●	●	●	●
	8						●	●	●	●	●	●
Type B: Student Exchange Teaching	1		●	●	●	●	●					
	2		●	●	●	●	●					
	3		●	●	●	●	●					
	4		●	●	●	●	●					
	5		●				●		●	●	●	●
	6		●				●		●	●	●	●
	7		●				●		●	●	●	●
	8		●				●		●	●	●	●
Type C: Team Teaching	1	●	●	●	●	●					●	●
	2	●	●	●	●	●					●	●
	3	●	●	●	●	●					●	●
	4	●	●	●	●	●					●	●
	5				●	●	●	●	●	●		●
	6					●	●	●	●	●	●	●
	7				●	●	●	●	●	●		●
	8					●	●	●	●	●	●	●

● Students assigned to Teacher X SS = Social Studies/Sc = Science/Ma = Math/Rd = Reading/LA = Language Arts.
 ● Students assigned to Teacher Y

instructs the pupils, at least not during a particular term or year. Each classroom teacher works independently of other teachers, and students do not move from teacher to teacher for instructional purposes. As is evident in Figure 1, there is no sharing of students in self-contained teaching.

Student Exchange Teaching involves more interdependence among teachers. Two or more classroom teachers share in the instruction of a common group of pupils in different subject areas on a week-to-week, if not day-to-day, basis. The middle of Figure 1 shows that Teachers X and Y exchange students for science and social studies, but do not exchange students for math, reading and language arts. In student exchange teaching, one teacher's performance is minimally contingent upon the performance of at least one other teacher. They must cooperate in scheduling and are thus more interdependent than in self-contained teaching.

Team Teaching not only involves teacher cooperation in scheduling; it also involves joint teacher planning,

instruction and evaluation of student progress because students are taught by more than one teacher in the same subject. As the bottom of Figure 1 indicates, Teachers X and Y are team teaching in language arts to a high degree; they instruct the same students. In reading, the degree of team teaching is less; the teachers share only three students in the subject. In social studies, science and math they have a self-contained relationship. A teacher's performance in team teaching is highly contingent upon the performance of at least one other teacher. The degree of interdependence is high; even matters of scheduling can become very complex.

Findings about Teaching Relationships

As mentioned in Chapter 1, many social forces may have worked to alter the structure of the traditional school. As indicated in Figure 2, at the first collection of data only two schools (both of them control schools) had *all* teachers in self-contained classrooms and teaching independently of their grade-level colleagues. Furthermore, in ten experimental schools and four control schools less than half of the classroom teachers were in self-contained classrooms.

Figure 2: *Number of Teachers in Self-Contained Teaching Relationships Prior to the Installation of Units (Spring, 1974)*

Teachers in Self-Contained Classrooms	(Number of Schools)	
	Experi- mental*	Control
All	0	2
Most (half or over)	5	7
Less than half	10	4

* One experimental school failed to return useable data. Thus, we show only 15 experimental schools.



Figure 3: Percent of Self-Contained Teaching Relationships

Percent of Self-Contained Teachers

70%

60%

50%

40%

30%

20%

10%

Units Installed

T₁
Spring 1974

T₂
Fall 1974

T₃
Spring 1975

T₄
Fall 1975

T₅
Spring 1976

- Experimental schools.
- Control schools.



Just over half of the 439 teachers in 28 schools taught in self-contained classrooms in the spring of 1974. The remainder were involved in either student exchange teaching or team teaching.

If, as some proponents of unit structure argue, one effect of the installation of units is to move teachers from the isolation of self-contained classrooms, that effect could not be realized by all experimental schools in the MITT study. Many teachers were not isolated but had already developed some degree of interdependence and collaboration with others. Figure 2 indicates that in the spring of 1974 teachers in the

experimental schools did have more interdependent relationships than teachers in the control schools. Why the experimental schools had more interdependence than the control schools before units were installed, we cannot say. Perhaps unit organization tends to be adopted in schools where teachers are already favorably disposed toward team teaching, or perhaps teachers in experimental schools alter their instructional methods in anticipation of the impending change. In any event, a number of the schools that subsequently introduced unit structure had fewer teachers to move from instructional isolation to interdependence than one might normally expect. Teachers were already sharing students.

The Installation of Units and the Rise of Team Teaching

Following the formation of units in the experimental schools, teacher relationships were measured in the fall of 1974, in the spring and fall of 1975 and in the spring of 1976. At each of these times the organization of instruction in the experimental schools was decidedly different from what it had been before the installation of units. The percentage of teachers in self-contained relationships decreased by half and then leveled off. Most of the decrease, of course, occurred in the ten schools in which there had been more teachers in self-contained classrooms at the outset. In one experimental school that had been largely self-contained in the spring of 1974, however, no change occurred during the year following unit installation. Eighty-three percent of the teachers were in self-contained classrooms in the spring of 1974 and eighty-four percent remained so a year later. In the fall of 1975, however, that percentage dropped sharply as all but five teachers in that school formed student exchange relationships.

The trend in the percentages of self-contained classrooms through five rounds of data is illustrated in Figure 3, indicating the effects of implementing unit structure. While only about one

in four experimental school teachers were in self-contained classrooms after units were installed, the percentage of teachers in control schools in self-contained classrooms remained around 55 percent.

Teachers who had previously been in self-contained classrooms in the experimental schools most often entered into student exchange relationships, teaching the same youngsters in different subjects. Less often, they entered into team teaching relationships, teaching the same youngsters in the same subject. Student exchange teaching was also more common in control schools.

A few elementary schools in the MITT group included seventh and eighth grade pupils, and teachers at this level invariably engaged in

student exchange teaching. Schools for older students have typically been arranged in such a departmentalized manner, and the unit structure did not have an appreciable effect on this arrangement.

Although team teaching occurred less frequently than student exchange teaching, it increased dramatically in the experimental schools following the installation of units, as indicated by Figure 4. The numbers are a count of the *pairs* of teachers involved in team teaching.

Figure 4: *Number of Team Teaching Pairs*

	T ₁	T ₂	T ₃	T ₄	T ₅
Experimental Schools	25 *	76	87	50	49
Control Schools	17	9	14	13	9

*Units installed

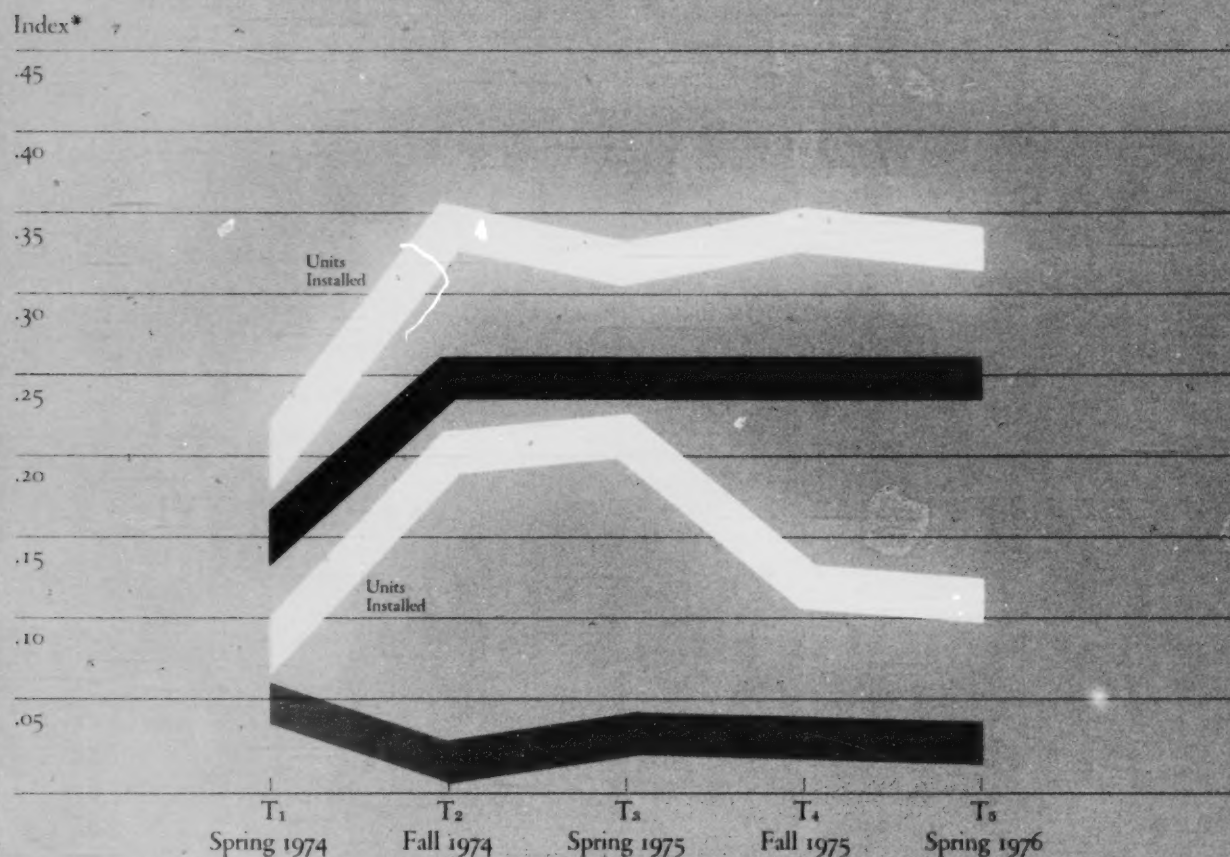
The number of teaming pairs remained constant among the 197 control school teachers but at times tripled among the 242 teachers in the experimental schools. One can note a decrease, however, in the experimental schools the second year following the installation of units (Time 4 and Time

5). This decrease may indicate the beginning of either a decline or of a leveling off of implementation efforts after the first year.

Although the number of team teaching pairs increased in experimental schools, team teaching was not the dominant type of teaching relationship. As is shown in Figure 5, student exchange teaching also increased in the experimental schools after units were installed. Student exchange teaching was more common in both experimental and control schools.

Furthermore, about a third of the teaming pairs in experimental schools exhibited only a modest form of team teaching. In fact, highly intimate and extensive teaming relationships covering all of the core subjects were exceedingly rare. Nevertheless, as Figure 5 illustrates, the unit structure did bring about higher levels of teaming and student exchange. The general organization of teaching in the experimental schools after units were installed was quite different than it was in the control schools.

Figure 5: Amount of Student Exchange Teaching and Team Teaching

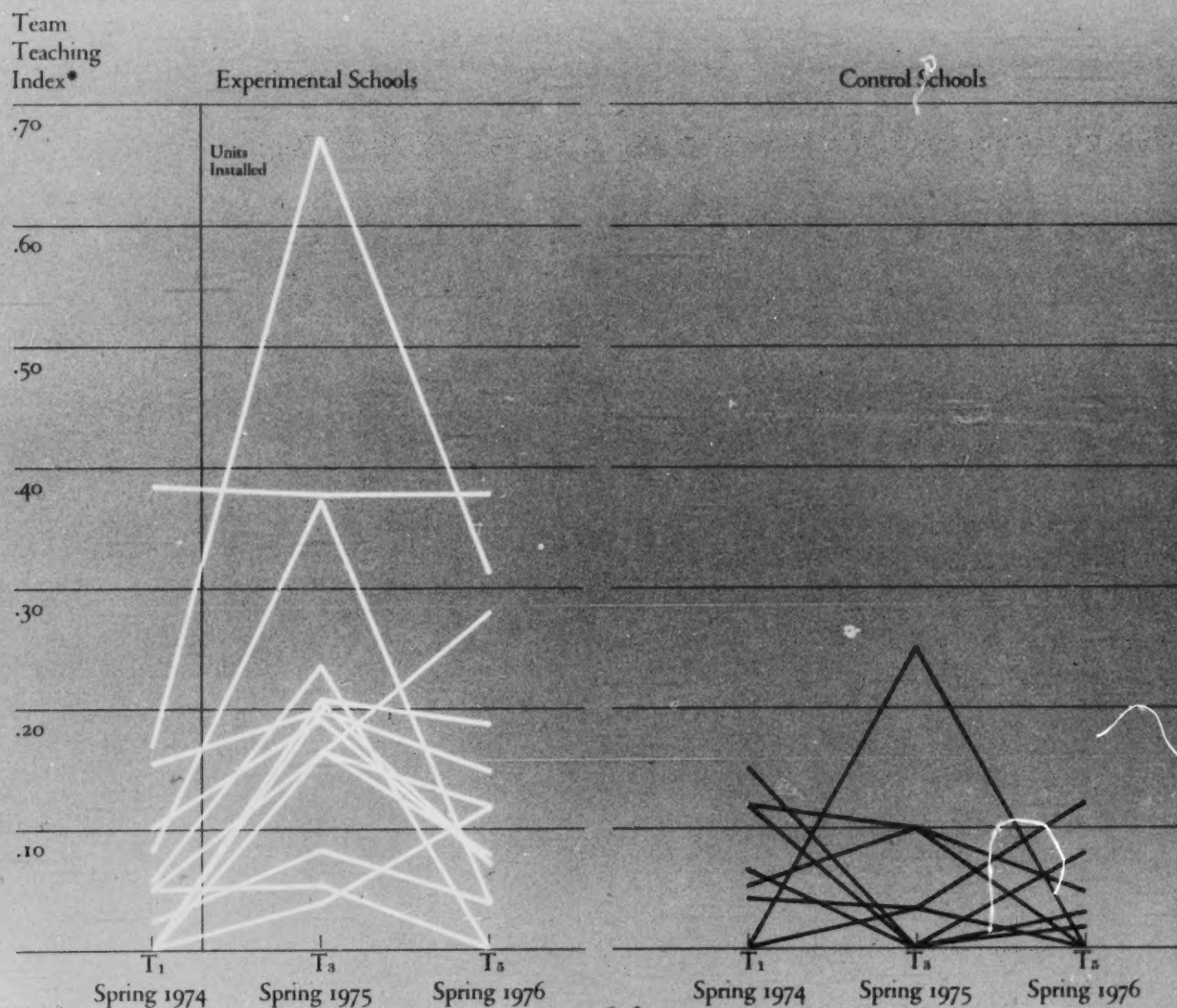


* Index is equal to the number of pairs of teachers divided by twice the number of teachers in a school.

□ Student exchange teaching, experimental schools.
 ■ Student exchange teaching, control schools.

□ Team teaching, experimental schools.
 ■ Team teaching, control schools.

Figure 6: Change
in Team Teaching



* Index is equal to the number of pairs of teachers divided by twice the number of teachers in the school.

Summary

While team teaching is a phenomenon associated with the *installation of units*, formal unitization cannot by itself explain the variety and diversity of work systems developed by teachers. Figure 6 illustrates the individual school scores of team teaching in the control and experimental schools. Although unit schools had a higher *mean* score and indicated a greater incidence of team teaching, there were some *individual* control schools which measured as high as some *individual* experimental schools. Apparently teachers attempted a variety of working relationships whether or not the school had formally installed units. The ways in which systems of two, three, four or more teachers can creatively subdivide and re-subdivide groups of students is seemingly endless.

In summary, Project MITT evidence shows the effects of the unit installation upon the instructional organization of elementary schools. Schools with unit structure were more apt to have teachers engaged in team teaching. At the same time there remained considerable variation among all schools whether or not they had a unit structure. The degree to which teachers engaged in team teaching *per se* also depended upon other processes emergent in the school. In the following chapter, we will compare the effect of unit installation on patterns of teacher communication, decision making and teacher attitudes.



Chapter 4
Related Findings:
Communication,
Decision Making
and Teacher Attitudes

Earlier research indicated that unit and conventional schools differed on variables other than team teaching. Researchers reported evidence suggesting that the unit structure gave rise to greater amounts of class- and school-related communication among teachers. Furthermore, there was evidence that in schools with units teachers made more decisions in groups. These important findings seem altogether plausible. Extensive communication and collegial decision making may be especially required for those who team teach. It was not possible, however, to tell from these studies whether communication and decision-making patterns changed before or after the introduction of units. The MITT

research design allowed us to decide which was the better explanation.

Earlier studies also showed that teachers in unit schools had a greater sense of influence, autonomy and job/career satisfaction than did teachers in schools with conventional organizational structures. These findings may mean that teams gain control over decisions which individual teachers rarely make, leading to a sense of greater group and individual influence, improved feelings of satisfaction with work and career, and feelings of greater autonomy. Because it includes both "before" and "after" observations, the MITT research design allowed for an adequate test of this line of reasoning.

The findings about these variables will be presented in this chapter. At present we are unable to corroborate all previous research findings. Teacher behavior—that is, teacher participation in decision making and teacher communication—did change in ways which were predicted in MITT sample schools. Teacher attitudes, however, did not change as expected.

Decision Making

The theoretical orientation guiding Project MITT led to the premise that the installation of units in elementary schools would lead to increased amounts of team teaching, requiring closer teacher collaboration in the management of instructional and school-wide affairs. One element of teacher collaboration centers around decision making. We predicted:

Hypothesis 1: Teacher groups will make more decisions about instructional and school-wide issues in schools that have units than in schools with conventional organizational structures.

To test this hypothesis, we identified the decision makers of instructional and school-wide issues. Four basic and inclusive decision types were used to

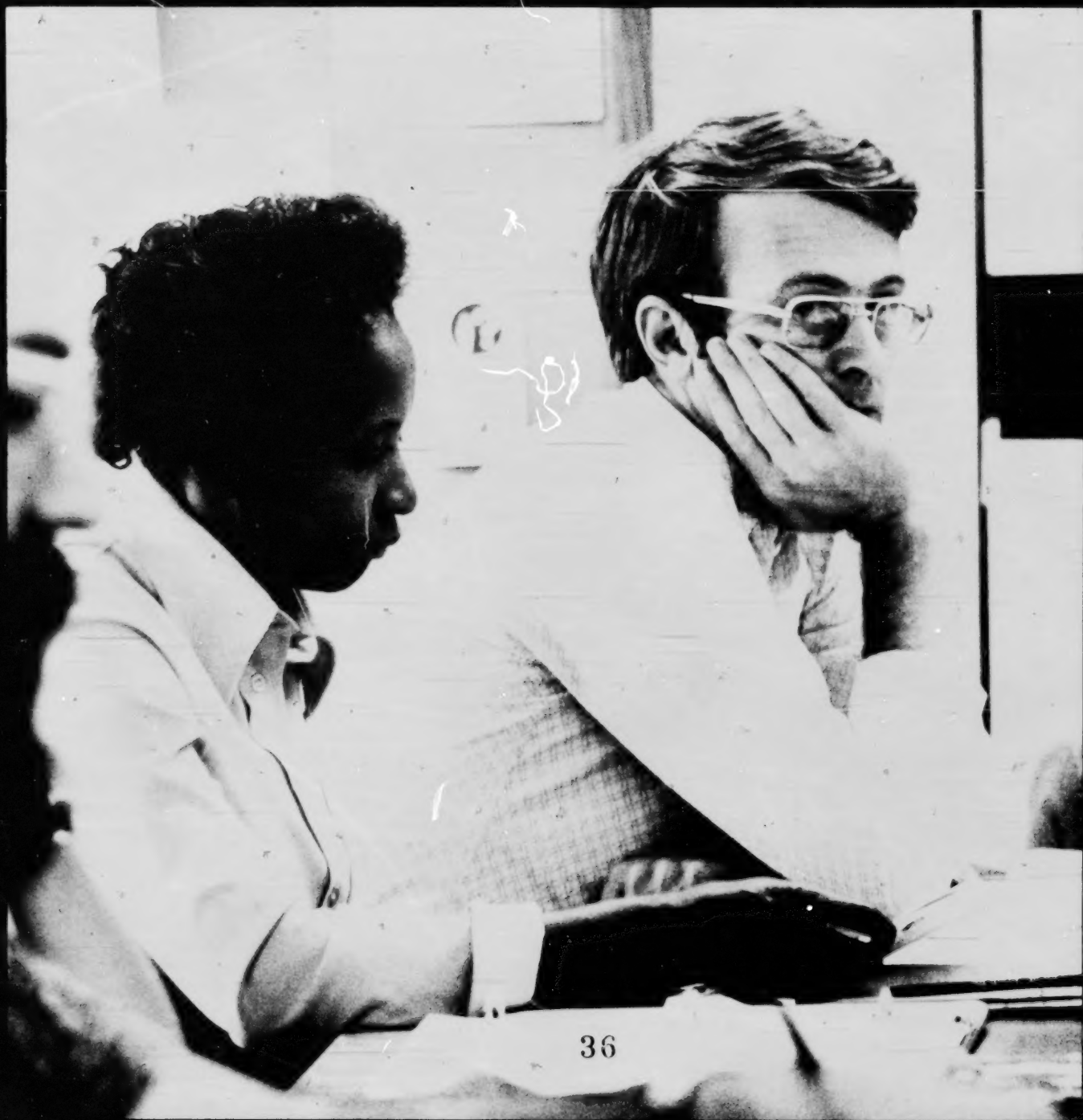


Figure 7: Collegial and Discretionary Decisions

Percent
of Decisions

50%

40%

30%

20%

10%

Units
Installed

Units
Installed

T₁
Spring 1974

T₂
Fall 1974

T₃
Spring 1975

T₄
Fall 1975

T₅
Spring 1976

- Discretionary decisions, experimental schools.
- Discretionary decisions, control schools.

- Collegial decisions, experimental schools.
- Collegial decisions, control schools.

summarize the data: collegial, shared, removed, and discretionary. These types of decisions are described below.

Consider that a decision has been made that all third grade teachers will give reading instruction from 10:30 to 11:15 each school day. If the decision was made exclusively by the third grade teachers, the decision would be called *collegial* since it was made by the teacher group. The decision would be called *shared* if it were made by some or all of the third grade teachers in conjunction with some other person, such as the principal. The decision would be called *removed* if none of the third grade teachers helped make it. The decision would be called *discretionary* if each teacher made the decision independently of the others. It is unlikely that if each teacher



exercised discretion all teachers would have chosen the same reading period.

In Hypothesis 1, we predicted that there would be an increase in collegial decisions made by the teacher group in schools that installed the unit structure. The number of decisions which can be made is finite. We assumed that as the percent of collegial decisions increased in schools with units, the percent of removed decisions would decrease. In schools with a conventional organization, we expected no change in the percent of decisions of the four basic types.

Our findings are somewhat surprising. As shown in Figure 7, the percent

of collegial decisions increased after the experimental schools had installed units. But contrary to our expectation, the largest corresponding change was not a decrease in removed decisions but a decrease in discretionary decisions. In other words, in schools with units individual teachers lost individual discretion to the teacher group, which may have been the teaching team. The percent of removed decisions did not decrease very much following the adoption of units. As predicted, in control schools the percent of decisions of each type remained constant over the period of observation. The collegial and discretionary type decisions are illustrated in Figure 7.

Communication

38

A second element in the management process is communication about instructional and school-wide issues. We expected that the unit structure and teaming would affect communication in a manner similar to the way in which decision making was affected. We predicted:

Hypothesis 2: There will be greater teacher-teacher communication about school and classroom affairs in schools with units than in schools which do not have units.

The amount of teacher-teacher communication was described in two ways. *Extensivity* refers to the number of teachers with whom a teacher talked about school or classroom affairs on a daily basis. *Intensity* refers to the average frequency of their contact—daily, weekly or less often.

The prediction that the amount of school- and classroom-related communication would increase after unitization held true for only the extensivity of communication. Figure 8 shows that teachers in experimental schools talked to more of their colleagues than did teachers in control schools, even before units were installed, but that

extensivity of communication increased in the fall after units had been installed. Meanwhile, the number of colleagues with whom control school teachers communicated remained constant.

An interesting finding of the study was that the unit organization did not affect intensity of communication. In both experimental and control schools, teacher contacts about classroom affairs occurred between two and three times per week. This average did not change significantly through time. In short, the unit structure increased the number of colleagues with whom teachers talked but did not increase the frequency of those contacts. Extensivity of communication is illustrated in Figure 8.

Perceptions of Influence

Earlier studies showed that teachers in unit schools felt more influential, both as a group and as individuals, than did teachers in conventional schools. It was argued that the unit may have become an effective political base in the school giving members more influence over various affairs. In the earlier studies, however, teachers in unit schools did not indicate that their principals were more or less influential than the principals of teachers in conventional schools. Project MITT sought to replicate these findings. The following hypotheses guided this aspect of the study.

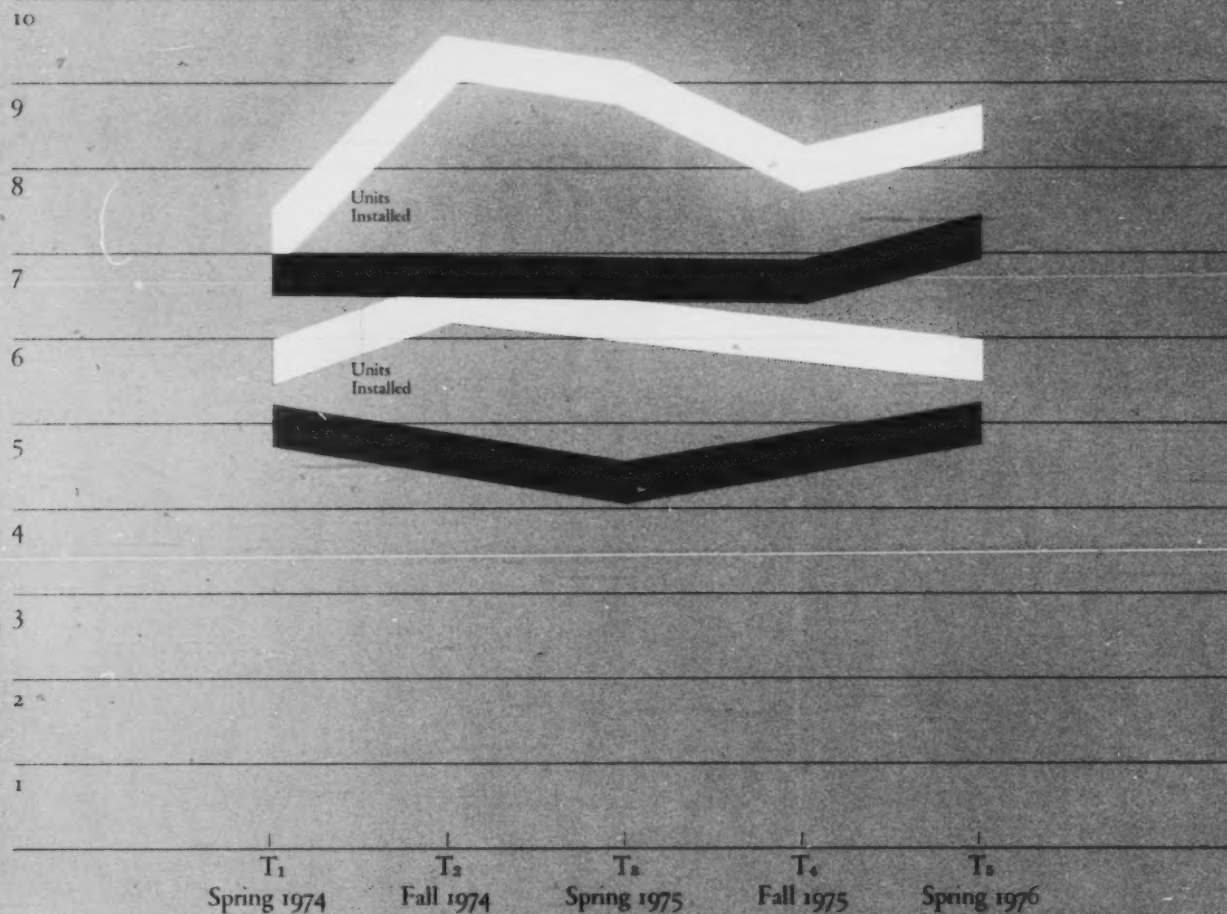
Hypothesis 3: Teachers will perceive that individual teachers have more influence over school-wide affairs in unit schools than in conventional schools.

Hypothesis 4: Teachers will perceive that teachers as a group have more influence over school-wide affairs in unit schools than in conventional schools.

Hypothesis 5: Teachers' perceptions of the principal's influence on school-wide affairs will not be affected by the unit structure.

Figure 8: Extensity of School and Classroom Communication

Average number of teachers with whom teachers are in contact



■ School communication, experimental schools.
 ■ School communication, control schools.

■ Classroom communication, experimental schools.
 ■ Classroom communication, control schools.

Figure 9: Sense
of Individual Teacher
Influence on School Affairs

Amount of influence

Great

Much

Moderate

Little

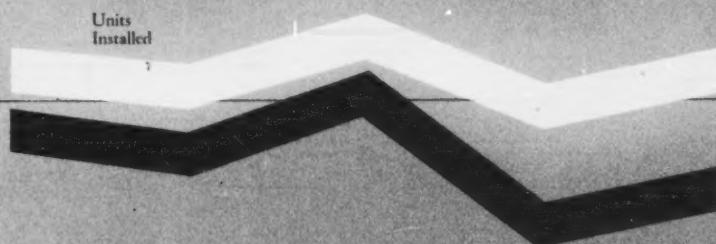
None

T₁ T₂ T₃ T₄ T₅

Spring 1974 Fall 1974 Spring 1975 Fall 1975 Spring 1976

■ Experimental schools.

■ Control schools.



As indicated in Figures 9 and 10, there was no difference in the sense of teacher influence that could be attributed to the unit structure. Teachers did not feel that, individually or in a group, they exerted more influence over school-wide affairs after the installation of units.

It appears (Figure 10) that teachers' perceptions of their influence as a group remained relatively stable in the conventional schools. There was a trend suggesting, however, that the unit structure may have produced a slightly greater sense of teacher group influence. The lowest point of teacher group influence in experimental schools occurred before units were installed. This low point may have resulted from disagreements among faculty members about the advisability of introducing units into their schools.



Teachers may have perceived they had little control over the decision to adopt units. Upon the installation of units in the fall of 1974, however, sense of teacher group influence increased, which may have indicated that once the decision was made teachers in experimental schools felt somewhat more influential in determining the course of events. We must point out that at no time did experimental and control schools differ significantly on this variable. In other words, in the MITT study, unlike earlier studies, sense of teacher group influence was not affected by the unit organization.

As predicted in Hypothesis 5, teachers' perceptions of the influence of the principal did not distinguish between

control and experimental schools. The personality characteristics of the principal, the leadership style adopted by the principal, the composition of the staff, the qualitative interaction between a principal and a teacher, and the guiding educational philosophy of the school all combined to create an interaction between a principal and his or her staff which affected teachers' perceptions of the principal's influence on school affairs. There were so many factors involved in determining teachers' perceptions of principal's influence we did not expect, nor did we find, the one factor of a unit organization to have a differential effect. This is illustrated in Figure 11.

Figure 10: Teacher Sense
of Teacher Group Influence
on School Affairs

Amount of influence

Great

Much

Moderate

Little

None

T₁
Spring 1974

T₂
Fall 1974

T₃
Spring 1975

T₄
Fall 1975

T₅
Spring 1976

■ Experimental schools.
■ Control schools.

Figure 11: Teacher Sense
of Principal Influence
on School Affairs

Amount of influence

Great

Much

Moderate

Little

None

Units
Installed

T₁ T₂ T₃ T₄ T₅
Spring 1974 Fall 1974 Spring 1975 Fall 1975 Spring 1976

□ Experimental schools.
■ Control schools.

Teachers' Autonomy and Job Satisfaction

44

Earlier research findings were contradictory regarding teacher sense of autonomy. One study reported that autonomy increased after units were installed. The second reported that autonomy decreased after units were installed. Project MITT argued that if teachers made fewer discretionary decisions, they would feel less autonomous.

Hypothesis 6: Teachers will report less autonomy in unit schools than in conventional schools.

Neither this line of reasoning nor the findings of the previous studies were supported by the MITT data. As is shown in Figure 12, teacher sense of autonomy did not change appreciably in either the experimental or the control schools over time. Teachers in control schools reported slightly higher



levels of sense of autonomy. The lack of a change in teachers' attitudes was all the more surprising considering that teachers in unit schools had relatively fewer discretionary decisions (see Figure 7) after units had been installed.

The earlier studies were consistent in finding that teacher job/career satisfaction was greater in schools with units. So at the outset of the study our prediction appeared to be strong. We predicted:

Hypothesis 7: Teachers will report greater satisfaction with their jobs and careers in unit schools than in conventional schools.

As the study progressed, however, it became apparent that Project MITT would not be able to corroborate this earlier finding. As is shown in Figure 13, teachers in experimental schools actually reported somewhat lower levels of job/career satisfaction than did teachers in control schools. Again, these differences are not significant.

We are uncertain about the explanation of this finding. Since it was unexpected, it raises the possibility that experimental schools in the MITT sample were systematically different from experimental schools in earlier studies. We shall investigate this possibility in our continuing analysis of data.

Figure 12: Individual Sense of Teacher Autonomy

Amount of autonomy

Great

Much

Moderate

Little

None

Units
Installed

T₁
Spring 1974

T₂
Fall 1974

T₃
Spring 1975

T₄
Fall 1975

T₅
Spring 1976

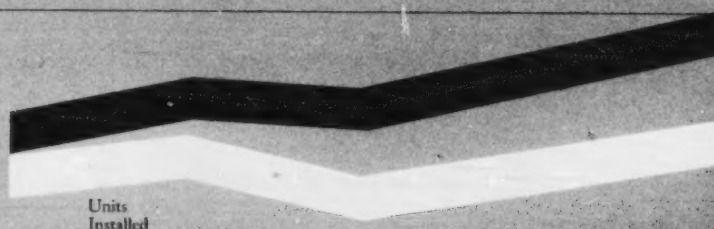
■ Experimental schools.

■ Control schools.

Figure 13: Teacher Satisfaction with Job and Career

Level of satisfaction

Very High



Moderately High

High

T₁ Spring 1974 T₂ Fall 1974 T₃ Spring 1975 T₄ Fall 1975 T₅ Spring 1976

□ Experimental schools.
■ Control schools.

Summary

Clearly, the installation of units changed the behavior of elementary teachers, especially as such behavior pertained to the organization and management of instruction. The unit organization seemed to spark a considerable increase in the amount of team teaching. In conjunction with this change, the unit organization also stimulated greater teacher group participation in decision making. Through this process, teachers lost their individual discretion to the teacher group. Furthermore, the unit organization affected teacher-teacher communication. In unit schools, teachers contacted a greater number of colleagues on issues of instruction and on issues which pertained to the school. These significant alterations in the structure of elementary schools imply basic changes in the teaching role.

Units and the attending behavioral changes were not, however, accompanied by changes in teacher attitudes. Teacher sense of individual and collective influence, individual autonomy, and job/career satisfaction were no different in schools that installed units than in schools with a conventional

organizational structure, suggesting that teacher attitudes were shaped by many factors over and above organizational and structural changes. In future data analyses Project MITT will pursue lines of investigation that may shed more light on the subject of teacher attitudes. Another possibility that might help us better understand the lack of change in teacher attitudes is the substantial differences among schools that adopted units. Whereas in this chapter all the scores presented are experimental and control school *averages*, the following chapter looks at the individual school scores and illustrates variations among experimental schools.



Chapter 5
Variations in
Team Teaching Among
Experimental Schools

The findings of Project MITT reaffirmed a key finding from previous studies. The introduction of units leads to increased levels of team teaching. Yet the adoption of a unit structure did not *ipso facto* lead to team teaching. Indeed, some schools not organized into units engaged in more team teaching than did some schools with a unit organization. The amount of team teaching differed within a school at different times, and even differed from unit to unit within the same school. Furthermore, among schools simultaneously adopting a unit structure, some schools developed and sustained higher levels of team teaching than did others.

The picture is a complex one which has neither presented definite patterns nor allowed us to predict outcomes with confidence. In this chapter we will describe the variations among experimental schools and how key variables may have played important roles in promoting team teaching.

Variations among Experimental Schools

In the fall of 1974, 16 experimental schools installed the unit form of school organization. From the fall of 1974 to the spring of 1976 there was considerable variation in teaming among the experimental schools. Five schools showed initially high and relatively permanent levels of team teaching. Six others showed modestly high and somewhat less stable levels of team teaching. The remaining five had only brief episodes of team teaching. In order to show more clearly the effects of selected variables on teaming, only the ten schools with the highest and lowest levels of team teaching will be discussed.

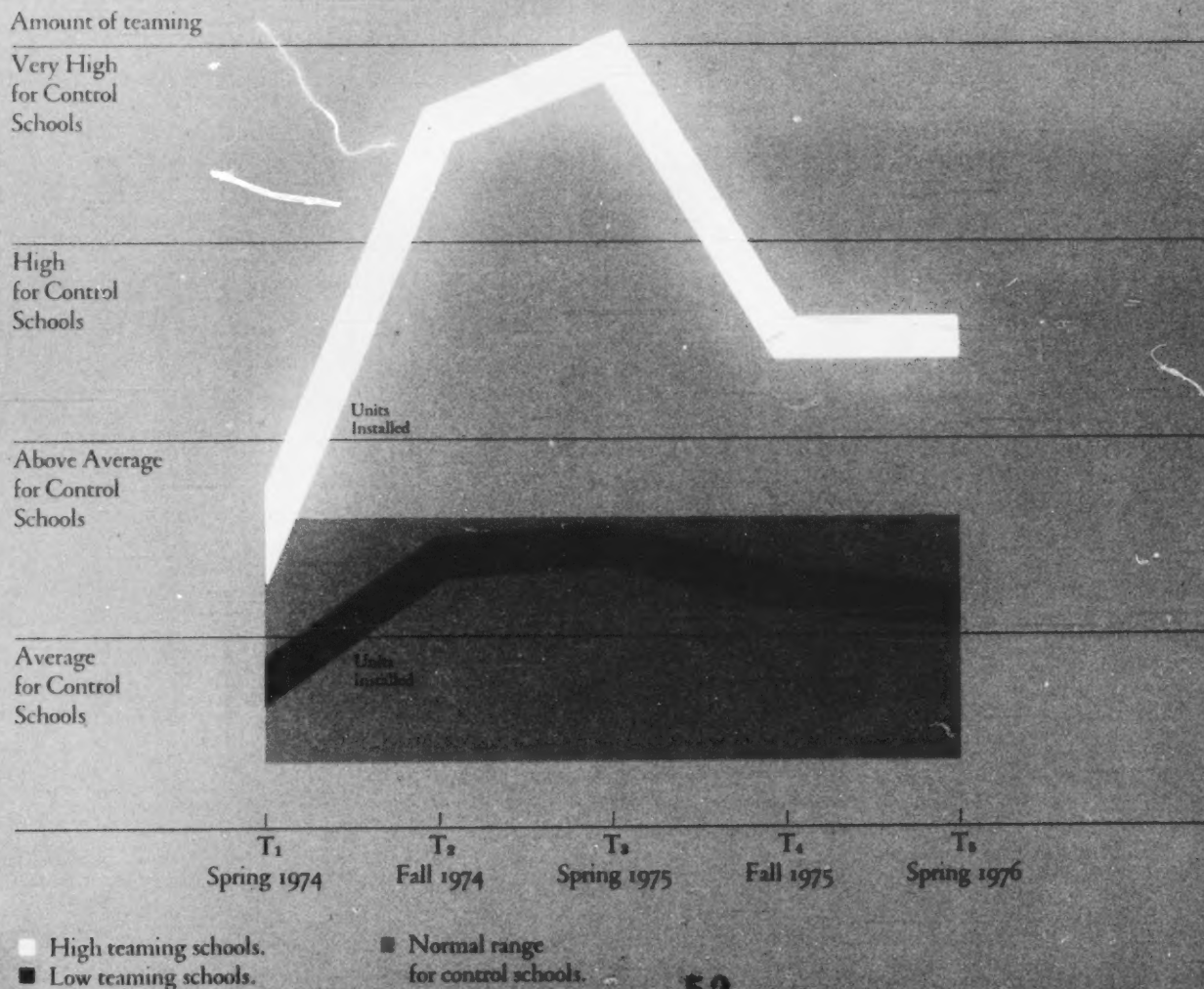
Figure 14 illustrates the differences in teaming between the two groups of schools. Control schools are used as a comparison. The shaded area in the center of the figure represents the range of team teaching one might expect to find in non-unitized or control schools. The black line which lies within the shaded area represents the average level of team teaching in the five schools with the lowest levels



of team teaching. The white line above the shaded area represents the average level of teaming in the five schools with the highest levels of team teaching.

The effect of unit installation is apparent at Time 2. Both kinds of schools began at Time 1 within the range of normal teaming for a non-unit school. In the fall of 1974 they both

Figure 14: Variations
in Team Teaching Index
Among Experimental Schools



The Critical Distinctions among Experimental Schools

52

showed greater levels of teaming than they had shown in the previous spring. We attribute this change to the introduction of units. Throughout the two years of data collection, experimental schools maintained relatively higher levels of team teaching than did conventional schools. However, there is a dramatic difference between schools with high levels of team teaching and schools with low levels. The low teaming schools as a group never exceeded the upper level of team teaching one might find in a control school. On the other hand, the high teaming schools far exceeded that level. In the following section we will describe the forces that seem to explain this dramatic difference.

There were certain characteristics which seemed to lead to differences in team teaching among experimental schools. Before we discuss these characteristics in depth we will address assumptions about specific features of schools and school districts which did not appear to affect the level of teaming in unit schools. First, district size and wealth were not related to level of teaming; in both groups there were rich and not-so-rich, large and small schools. Second, age and architecture of the school building were not critical distinctions. Only one school had open-space classrooms, and this school had a low score on the team teaching index. Third, the location of a school, whether in a rural, suburban, or urban setting, seemed to be unimportant, as schools in all three locations were represented across high and low team teaching levels. Finally, faculty attitudes about the education process and initial faculty support for adopting units did not appear to be related to the level of team teaching in a school.

The distinctions which did seem to make a difference in the amount of team teaching in which a school staff engaged were:

1. Clarity of staff expectations.
2. Staff composition.
3. Amount of experimentation in the school.
4. Subject areas chosen for team teaching.
5. Principal leadership style.
6. Long-term external support.

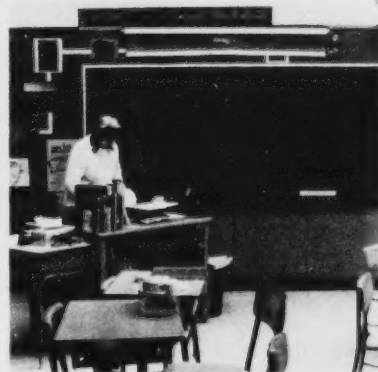
Each variable was important in its own right; in addition, we believe that these variables were inter-connected and that their effects were cumulative.

Clarity of staff expectations preceded the actual implementation of unit structure. Clarity was indicated in two ways: by the nature and amount of teacher participation in the decision to adopt units, and by the degree to which teachers felt that they could influence the innovation or exert control over the decision.

Teachers in schools with more team teaching seemed much clearer at the outset about unit structure and what it would require of them than did teachers in schools with less team teaching. In some high teaming schools, teachers participated heavily in preliminary discussions and decisions. In other high teaming schools, teachers had little or no say in the decision to adopt units. At the same time, teachers in all high teaming schools felt that they had relatively low control over the proposed changes. On the other hand, teachers in low team teaching schools reported only moderate involvement in the discussions and decisions about adopting unit organization and, at the same time, reported relatively high levels of control. These facts suggest that teachers in schools high on the team teaching index knew what to expect whether or not they had been able to participate in the initial decision to install units. On the other hand, teachers in schools with low amounts of team teaching were less clear about what the future might bring and what the innovation might imply for their roles.

Staff composition was related to high and low team teaching scores. Schools with high levels of team teaching had relatively high rates of teacher turn-over immediately prior to the fall of 1974 when units were installed. A number of new teachers joined these faculties at the beginning of the first year of the project. On the other hand, low teaming schools had much lower teacher turn-over at that time; thus, fewer new teachers were initially recruited for these schools.

After units had been installed, teacher turn-over in high teaming schools occurred as new teachers replaced other new teachers. As a result, high teaming schools had more new teachers over the course of the project than did low team teaching schools. In low teaming schools,



teacher turn-over was greatest at the beginning of the second year of the project. Here new teachers replaced veteran teachers.

We can only guess why these differences in staff composition existed. In high teaming schools teachers who left prior to installation may have done so in order to avoid the projected changes. Teachers who replaced them and teachers who remained may have chosen to adapt to the new structures. Over time veteran teachers constituted

a solid core of personnel who could be relied upon to carry on the innovation and incorporate newcomers into the existing format. Newcomers who could not adapt may have elected to leave at the end of the first year to be replaced by others who had an opportunity to fit into the teaming pattern established by the veterans.

In low teaming schools, however, new teachers did not enter the schools in great numbers until the beginning of the second year of the project. Since the previous year was difficult, and perhaps unpromising, veteran teachers who left may have been the ones who welcomed the project initially. Veteran teachers who remained may have been less inclined to adopt teaming. If this assumption is correct, then in low teaming schools during the second year newcomers were matched with veterans who were not disposed to teaming, thus these newcomers were fitted into self-contained teaching patterns.

These differences in the composition of faculties of low and high team teaching schools are especially important when considering an additional point. Teachers in their first year in a school were more likely to be involved

in teaming than were teachers with more tenure. Newcomers who joined a faculty favorable towards teaming clearly augmented the teaming effort. Newcomers who joined a faculty which attempted and then discarded increased levels of teaming could *not* be expected to have a similar, major impact.

The amount of experimentation in schools with high levels of team teaching was greater than in schools with low levels of team teaching. Almost twice as many pairs of teachers attempted team teaching in high teaming schools. This fact was remarkable in that the high team teaching schools were roughly twenty-five percent smaller than the low team teaching schools. Moreover, high team teaching

schools made more attempts not only in teaming but also in student exchange. These schools did not choose one form of cooperative teaching over another but experimented extensively in both. The work systems of high team teaching schools were thus more complex. Apparently low team teaching schools were not able to mount and sustain similar levels of team and student exchange teaching.

Subject areas selected for team teaching also distinguished between high and low teaming schools. High teaming schools made proportionally more attempts to team teach in reading and language arts than did the low teaming schools. In the high team teaching schools about seventy percent of attempts to team were in reading and language arts; in low teaming schools only about forty percent of the attempts were in these areas. What is particularly remarkable about reading and language arts is that sixty percent of the teaming efforts in these subject areas endured for longer than a few



The Implementation Process

56

weeks. In the other subject areas (math, science and social studies), the "survival rate" was only about twenty percent. Thus, low teaming schools attempted to team in subject areas in which it was apparently very difficult to sustain the effort required to manage the work system.

Why different schools elected to attempt more team teaching in some subject areas is not clear. The better survival rate of teaming in reading and language arts may well be due to the availability of more materials developed for unit schools in these areas but not in other subject areas. High teaming schools may have acquired more of these materials than low teaming schools. Furthermore, high teaming schools may have adopted units in order to enhance instruction in reading and language arts. Low teaming schools may have adopted units for different reasons.

Principals of high team teaching schools were often—but not always—viewed by the faculty as having a more open style of leadership. This finding revealed as much about the nature of interactions between principals and their staffs as it did about the personality characteristics of principals *per se*. Teachers in schools that exhibited high levels of teaming may have viewed the principal as a person whom they could approach and perhaps influence.

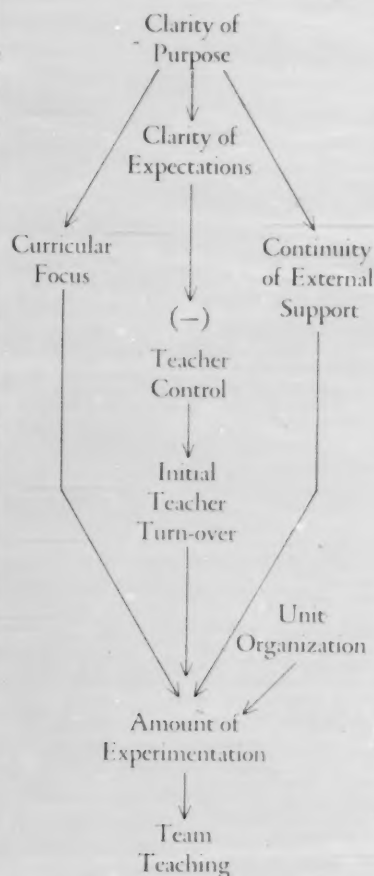
Sustained contact with external support was more typical of high team teaching schools than of low team teaching schools. Before and during the fall of 1974, when the schools were installing units, low teaming schools had almost twice as much contact with external support agents as did high teaming schools. Beyond that point, however, the low teaming schools had almost no workshops or consultant help. In contrast, high teaming schools had a steady level of contact with external agents throughout the period of observation. This very clear difference suggests that continuous contact with outsiders who provided assistance and insight was manifested in higher levels of innovative activity in school operations.

When taken individually each of the variables just described seemed to affect the level of team teaching in schools that installed units. The variables did not, however, act independently from one another. Rather, these and other forces in combination influenced the outcome of the innovation. Together these forces represent key aspects of the implementation process whereby the unit structure resulted in higher levels of team teaching. This process is diagrammed below.

The diagram in Figure 15 is an outline of a highly speculative explanation of the relationship of the implementation process to team teaching. In fact, some of the variables were not measured directly. Moreover, the explanation is based on a small number of special cases. Nevertheless, on the basis of the evidence now available, the argument represented in the figure seems plausible.

Some schools were clearer about the purposes for which they adopted unit organization. Their greater clarity of purpose translated into sustained con-

Figure 15: *Variables that Define the Implementation Process*



tact with external support agents and into a particular programmatic or curricular focus. Clarity of purpose also translated into greater clarity about role expectations for the teaching faculty. Clear role expectations, coupled with a clear and strong sense of purpose led to low sense of faculty control over the fate of the project. Low sense of fate control caused some teachers to leave the faculty prior to the time when units were installed. Upon the installation of units, the combination of faculty composition, external project support and a particular curricular focus—in this case, reading and language arts—led to greater experimentation in the work system. More team teaching was instituted in the targeted subject areas where it continued over longer periods of time.

Conversely, where the purposes for the innovation were less clear, there was less likelihood of sustained external support and of the identification of a curricular focus. Simultaneously, faculty members were less clear about the changes which might transfer to their roles. Teachers had a relatively greater sense of control over the fate of the project and were less likely to leave the school. The installation of units

was insufficient, in and of itself, to stimulate a critical mass of experimentation. Lacking external support and a particular curricular emphasis, teachers had no particular impetus to voluntarily alter the work system. Few teaming attempts were made and fewer endured.

The principal's role in the implementation process was of critical importance. Unfortunately, we have little data to bring to bear on this question. Unit schools with higher levels of team teaching may have had principals who were more supportive of teacher-initiated change. Their help in bringing external agents into the school and in championing a particular curricular change may have been expressions of this support. Anecdotal evidence strongly suggests that principals were key figures in the change process.

Tenacity

58

As time and again we sifted through the data looking for critical clues to the implementation process, we were impressed by a factor we have come to call tenacity. We were not clairvoyant enough at the outset to attempt to measure tenacity. We have not been clever enough to reshape our existing data to represent numerically what we mean by the term. Nevertheless, shreds of evidence and strong intuition lead us to nominate tenacity as, perhaps, the most critical element in the implementation process.

Tenacity is the ability to stay with a project when the costs seem to outweigh the benefits by an overwhelming margin. Tenacity is largely an individual characteristic which gives others the inspiration or courage or strength to move ahead toward a distant goal. Among the experimental schools in Project MITT we found a sizeable proportion with one or two



faculty members who apparently exuded this quality. A few key people in schools with the highest levels of teaming seemed to feel that team teaching was worth the effort. They carried that message to their colleagues. When the situation was troublesome, their hard work and perseverance sustained the others.

Tenacity was sooner or later rewarded by the contributions of others. Resistant teachers left, new teachers arrived, and the idea of teaming grew. Consultants were brought in, workshops were conducted and in-service sessions were arranged. More people began to view teaming as a road they would follow. Materials in reading and language arts were introduced,

and teachers began to concentrate their energies on making teaming work. When teams appeared to be faltering, someone gave the extra spark that helped them move ahead.

Tenacity is the missing ingredient in Figure 15. Each high teaming school did not score high on each of the factors which we have designated. In fact no single school perfectly represents the argument outlined in the diagram. Moreover, some of the low teaming schools were beginning to show signs of much greater levels of team teaching at the time our observations were discontinued. In most of these cases we feel we can point to the efforts of one or two individuals who helped to overcome the short supply of key implementation resources.

Summary



We have described two kinds of experimental schools. One group had high levels of team teaching; one did not. There were different rates of teacher turn-over, different views about principals, different levels of contact with outsiders and other distinctions that seem to add up to differences in levels of team teaching. Beyond the facts, however, it is our distinct impression that an intangible quality, *ténacity*, played a major role in setting the level of teaming in experimental schools.

There were other intangibles. Team teaching is not an easy endeavor. Above the added work and complexity it brings, team teaching is a people process. Because teaming brings teachers, administrators, students and sometimes parents into closer contact, the quality of their interactions is crucial to team teaching's continuation. The quality of these interactions cannot be totally discerned from the MITT data, nor are they important only in schools with unit organization. To capture something of the flavor of this people process, the next chapter reflects human events which we believe characterized and shaped life in the various kinds of elementary schools.



Chapter 6
The Living School

In the last three chapters we have presented evidence gathered through questionnaires, logs and interviews in 29 elementary schools. There is an abundance of data—miles of computer tape and piles of computer print-outs. All this gives but a narrow view of any school in which people play out rich and varied roles. The evidence continually suggests emotions, problems and human interplay—the living school.

In one way, MITT data are like the artifacts an archeologist might unearth at the site of a previous culture. From bits of weapons and bone, shards of pottery, samples of artwork and other human debris, the archeologist tries to reconstruct the patterns of life of those who may have long since been forgotten. Our "artifacts" are not the physical remains of an extinct human culture, but rather the results of sophisticated measurements of ongoing organizations. These data give rise to visions of the living environment of schools.

We shall portray our impressions of these environments by reconstructing some critical events as they might have

happened. The following vignettes are altogether fictional. They do not represent any single individual or school but have been written to illustrate key incidents involving teachers, administrators and students in the schools under study. In reading the vignettes, one will inevitably look for parallels in one's personal experience. To the extent that situations seem familiar, we may have succeeded in capturing some of the essence of the living school. Any similarity to particular people, places and events, however, is purely coincidental. This chapter is an attempt to blend MITT data in a unique manner to better convey our sense of their contextual significance.

Leaving

"You too?" Myrna wanted to reveal her delight and relief. Suddenly the press of the first hot day of summer lifted.

"Yes, I agree with you. And I think you're absolutely right to resign."

Myrna was puzzled. Sylvia had never expressed any dissatisfaction with this latest idea of Bill, the principal. Why was Sylvia leaving now?

"I know I'd better get out," Myrna declared. "But I didn't know you felt the same way. I didn't think that you might leave too."

"It's all wrong," Sylvia said reassuringly.

"Yes," Myrna blurted out eagerly, thinking that at last there was some support for her position. "This teaming thing is all wrong. It's bad for the little ones. They get lost unless they have just one teacher. There will be too much moving around, too much insecurity. I can't understand why Bill is so sure of himself, why the others

Maryann

63



Maryann looked over the list of faculty members again. "Hmmm," she murmured. "Here are the room assignments for those three people we hired. Guess I'll have to get to them right away." Tucking a notebook under her arm, she set off down the hall.

"Helen Kern? I'm Maryann Miguel. Remember, we met last spring when you came for an interview?"

The petite blonde looked up from the stack of papers on her desk. "Oh, hi," she said, not getting up from her chair. "I was really glad to get this job. It's a great place. But this pile of rules and regulations is going to kill me!"

Maryann smiled. "C'mon and have

don't speak up. They should know better." She pulled up abruptly. She hadn't meant to be so definite, so critical.

Sylvia stared back coolly. "It's not the teaming," she said. "It's Bill. He has no right to force us into this. Why, I've been teaming for years. There is nothing wrong with a little activity. The kids like it."

"So what's your point?" Myrna's spirits were dampened now. "If you don't object to teaming, then why are you leaving?"

"It's Bill. He has no right to force these things on us. I don't like to be treated this way. He treats us as if we didn't have minds of our own."

Myrna struggled with her thoughts for a moment. "I think we should cooperate. I mean, as long as we are part of the faculty, the principal has the right to expect us to follow the rules and work together. But if he expects us to do things we know are bad for kids, then we can't."

Sylvia glowered. "No one can force me to do anything. I won't stand for it. I told Jim that last night and said I was thinking of quitting. He agrees with me."

"It's not me I'm worried about," replied Myrna. "It's the kids. I just think you can't treat the little ones like they were objects. They need security. They *don't* need teaming." She was embarrassed and angry with herself now. She shouldn't have permitted Sylvia to pretend they were in agreement. Sylvia would never leave. She'd figure out some way to get what she wanted. Myrna knew she was alone in her decision. There would be no consolation. Maybe the new job would help. But that was so far away.

Suddenly Sylvia moved her chair and Myrna was brought back to the moment. "You be sure to come back for a visit when you get a chance," Sylvia said.

Myrna answered sadly, "I don't think I can. This breaks my heart after so many years. I feel that I've given my best. Good luck, Sylvia. I hope it all goes well."

some coffee with me, and I'll tell you all you need to know."

"Thank goodness," sighed Helen. Grabbing the stack of papers from the desk, she followed Maryann, who was already out the door and marching briskly down the hall. When Helen caught up to her, she asked, "How long did you say you'd been here?"

"Almost seven years—no, almost eight years, in November. I first came when a teacher quit in mid-year, and I've been here ever since. And, man, has this place changed!"

"Changed? How?"

"I guess it's mainly the principal. She's a lot more open and willing to talk to us teachers than the other principal. And she's ready to support you when you try something new—even if the idea isn't such a good one!"

"I got that impression when I was interviewed. Is that how we got into this teaming thing? I mean, was it her idea when she came here?"

"Well, partly," Maryann replied.

"But partly it was also that a lot of other schools in the area were trying it and Rachel just felt a lot of pressure to go along. And partly, I've got to admit, some of the teachers gave her a gentle shove."

"Hey, that's neat—real teacher power!"

Maryann laughed. "Well, not exactly teacher power. But Rachel and I did share a lot of coffee in the lounge, if you know what I mean. Speaking of the lounge, here we are!"

The door swung open to reveal a bright orange and yellow room, with upholstered couches and a full complement of vending machines at one end. It was a pleasant, bright place, with a homey feeling that didn't extend to the cement-block-and-linoleum school-rooms. There was a handful of teachers in the room. As Helen followed Maryann, a grey-haired woman greeted them.

"Maryann!" she beamed. "It's good to see you. How was your summer?"

"Just great—but not long enough. Kay, I'd like you to meet Helen Kern, a new teacher in the unit."

"Good to meet you, Helen. I see Maryann has already got you under her wing. Did the same thing to me when I came three years ago. She'll take care of you—but," she added, with a wink and a smile, "be careful, or before you know it you'll be as hooked on this teaming thing as I am. And it's all Maryann's fault, you know."

"Oh, shush," said Maryann, grinning. "You just needed someone to give you an excuse to do what you really wanted to do anyway. But let's forget team teaching for a minute. Help me go over the rules and reg's with Helen—if she doesn't get through them, she'll never have time to teach!"

With that the three women settled into a corner couch and began to pour over the stack of paper from the central office.

Joining



He was confused and flustered. The intricacies of this schedule were beyond him. His failure to understand must have been obvious. He fretted and tried to compose himself.

"Let's see. My kids go to Mary for math. Then they go to reading. Then lunch. In the meantime, I'm supposed to take half of Betty's reading class and half of JoAnn's language arts class out to the playground or into the gym. Then I come in, get these three kids from Mary's group and these six from Betty and two from you and do reading. Right?"

"Well, almost," said Jane. "When you come back in you get three of my kids on Monday and Wednesday, but

not on Tuesday and Thursday. On Friday, then, you have your own."

"Yes, I understand about Friday. But what about Monday and Wednesday? Why yours?" He was afraid to look at Jane. She was tall, almost state-ly, her face reflecting her intelligence. He just *couldn't* fail to understand again:

"You get them because Mary can't double teach on Monday and Wednesday. You will be the double teacher then."

"Ah." It was beginning to sink in. "Monday and Wednesday. Mary goes to the resource center so I get Jane's kids." He was content and smiled. Jane still had a concerned look on her face.

"That's right, but it's not fixed, you understand. In order to work it has to be flexible. So it might change from

day-to-day, depending on what's happening. We've got to keep in touch constantly."

"Sure. Of course. We diagnose twice a week. The groups can change over-night."

"That's right," affirmed JoAnn.

"Half right," said Jane. "We diagnose all the time, each minute. We *test* twice a week, but we diagnose all the time."

"Maybe we are going too fast," said Mary. "Maybe Larry needs to start more slowly—to get the feel of things."

"Oh no," he protested. "I get it. I mean, I think I do. Let's just go ahead and try it. I usually do things right as soon as they get off paper and into practice . . . as soon as I get into the swing of things."

Jane was standing over him. She seemed awesome, larger than life. He wished he could take his words back. He felt the need to give them, especially Jane, the feeling that he knew what they meant. "Dammit," he said to himself. "This is just the setting I've

Doing It

66 been looking for. I can't botch it up a week before the kids arrive." He looked at JoAnn. She seemed to understand.

"He's got it. Let's move on to these science groups. You guys forget that Larry's coming in cold. It took us months to come up with this schedule."

"Yes, and it will take just minutes to find out what's wrong with it," Jane laughed.

"She laughed," he thought to himself. "She *is* human, just an average human being. And she can't figure it out either. I mean, she knows this schedule. They all do. And she isn't sure if it will work either." He realized that he could risk making a mistake.

"Wait a minute," he said slowly. He started again to review the schedule out loud. To his surprise, this time he understood it perfectly. He spoke more and more rapidly, delighted with his mastery of the mysteries of the

schedule. Now that he understood, he was no longer afraid to ask a question. In fact, he was warming up to it.

"That's right, isn't it? That's the schedule, subject to change at any moment. I've got it! Right?"

"Right!" they said in unison, smiling, anticipating his final question.

"And?" said Jane.

"And," he began, "if that is right, I mean, if I am right about the schedule,

...

"You are correct," said Jane, beaming.

He looked at her smiling eyes.

"Then, I really don't have any kids of my own. I mean, they are *our* kids, right?"

"Larry?"

"Yes?"

"I think we're going to do just fine!"

"Is that really what he said? I mean, is that all?" Jacob was stunned. He was also a little frustrated. He had been working at this thing for almost a semester, getting nowhere. And now, when he needed help so badly . . .

"Yes," said Alan, breaking into Jacob's thoughts. "That's what he said. 'I don't care how you do it, just do it.' And we don't even know what 'it' is."

"That's the point, that's exactly the point!" Jacob jumped up from his chair and began to pace around the room. "We don't know what 'it' is. Do you think anyone knows?"

"I've read a lot about individualizing instruction and team teaching, but I've never seen it done." Alan felt tired just thinking about it. "It" seemed like a lot of work to him.

"Me either. And maybe that's the problem. I just can't imagine how I could do all that by myself—and turn in the reports the central office keeps demanding."

"Yeah, that's the crunch. Maybe we can forget about this whole thing," Alan was hopeful that the subject would be dropped. He'd had enough of individualizing instruction to last him a lifetime. If only Jacob weren't so sold on it.



"But we can get help!" Alan felt none of Jacob's enthusiasm. "Listen, Alan. We can call those people in the city. Maybe they'll help us. Certainly Anderson won't."

Alan hesitated, then agreed. "I suppose some calls wouldn't hurt."

"I'll let you know what happened tomorrow. I'll call now while I can still use the school phone. See you later."

"Well?" The next morning Alan was refreshed from a relaxing night at a local baseball game and ready to tackle "it" all over again.

"Nothing." Now it was Jacob's turn to be tired and unenthusiastic. "I spent almost an hour on the phone yesterday with those clowns in the city and—nothing. All they said was that the summer workshop was supposed to have taught us all we needed to know. Do you remember the summer workshop?"

"Yeah, but it didn't do me any good. All theory and no practice. I mean, didn't they even suggest a teacher, a school where we should go to see it being done?"

"Nope, nothing. Just told us to keep up the good work. I've had it."

"But Jacob, you can't quit. You're



our source of energy. We'll fall apart without you." Alan felt almost like a coach, giving a pep talk to the team at halftime. "Hey, old buddy. We can work it out."

"Well," Jacob said slowly. "Maybe you're right. But I'm not encouraged. If we don't know what 'it' looks like, and if no one will show us . . . but let's talk about it over lunch, OK?"

"Good idea. At lunch, then." Their enthusiasm began to rise as they hurried down the hall to meet their classes.

Mission

"They are not going to buy it," said Gerald dejectedly. He slumped into the big wooden chair that somehow seemed safely moored to Judy's desk. Judy had been with the Center for only a few months. But she liked and understood schools; she had been a teacher before her years as a mother and housewife and she loved getting back into it. Judy often gave Gerald the keenest insights into his work.

"You mean the Scott school?" She leaned back, placing her glasses beside the porcelain vase Gerald had given her when she was hired.

"Yeah, the Scott school. That is the one place that really needs our help. But they just can't see it." Gerald had been with the Center for three years. His primary role was to assist schools in better organizing their teaching. It was careful work that required a delicate touch and a keen understanding of the human dynamics of the school setting.

"Isn't that the place where the superintendent believes they need training?" Judy asked. Gerald could sense that she was warming up to his problem.

"Yes," he said crisply, beginning to develop a glimmer of objectivity. "The problem is, he *told*

them they needed training! I can't do my work with a hostile group. I mean, it took me a long time even to get them to listen. They looked at me as if I were the superintendent's enforcer."

"Are they still hostile?"

"No, not really. But they've dug in their heels. They won't budge beyond the point of simple courtesy."

"Why do you suppose they won't budge?" Gerald thought Judy was beginning to sound like his former professor who used to say, "The answer is locked in your mind, Gerald. Only you have the key. Let's find the key."

If Judy is willing, so am I, he thought. "To begin," he said, "the school is the oldest in the district. It used to be the only K-12 school. As the district grew and new schools were built, it became the high school. Then ten years ago it was the junior high school. Nine years ago it was a middle



school; about five years ago, it became Scott elementary school. The present principal taught there both when it was a junior high and a middle school. He was named principal when Scott became a K-6 school, but he still wants to be the junior high school principal.

"In the meantime, the neighborhood has changed. Apartments have been built. It's a highly transient area. Scott has the largest free lunch and hot breakfast programs in the district. There is a high incidence of alcoholism. A number of children have no fathers at home. Many of the mothers work, or for other reasons are rarely at home. The kids have to fend for

themselves. The school has no band. The blacktop playground needs repair. The library is dreary. There is so much vandalism that the school looks like a fortress."

"Sounds like your basic country club!" Judy could see that Gerald was not amused. "Sorry," she said. "How do the teachers feel about all this?"

"They are great people," Gerald was surprised by his statement. He paused for a moment, deciding whether or not to retract the remark. Convinced that his intuition was correct, he continued. "Yes, they really are. They are aware of these problems; they see the problems and they want to help. Well, most of them want to help. You know, I get the feeling they really try the best they know how. They visit the homes. They try to get parents into their classrooms for discussion or to work as volunteers. They work with kids during their free time. It just seems that nothing they do makes a difference."



"What you have to do, then, Gerald, is show them how your program can help them to help the kids. It is a matter of pursuing the same goals with a new way of doing things."

Gerald had recognized this strategy long ago. "Yes," he said, "I thought that would make sense. But it didn't. I'm stuck, I don't know what to say to the staff that might make them more receptive. I want to help those kids, too, and the only way I know is through the staff. I can't help the kids unless I can help the teachers."

"Do *they* know you feel this way?" From their earlier conversations, Judy knew of Gerald's strong commitment.

"I'm sure they do. I haven't come right out and said it. It sounds too corny, like I'll say anything in order to sell my product. But I'm sure they know I want to help. We've talked at great length about their school and its problems. They can sense my concern. It's just . . ."

"Just what?" Judy felt that Gerald had stumbled on an important insight and didn't want to discuss it until he was sure of himself.

There was a long silence.

"What are you thinking, Gerald?"

"It's too wild, too incredible." He sat pensively.

"Come on, Gerald. We'll never know if it's a good idea unless we talk about it."

She was right. "You know all that stuff about Scott, all the problems and background?"

"Yes," she said.

"Well, I said they all wanted to help the kids. Right?"

"Right."

"There's something more. The teachers seem unhappy. I mean, they don't seem to like each other very much. They say nasty things about the principal, about the superintendent and even about each other. Each time I go in that school one of them corners me to criticize another staff member."

"That sounds like a nice place to work!" Judy was beginning to sound cynical.



Gerald could see the conclusion of his internal argument. "It sounds strange I know, but they seem unhappy and happy at the same time."

"What do you mean?" Judy couldn't figure where Gerald's thoughts were leading. "How can they be *happy* in that place?"

"I think it goes something like this. The teachers see how bad off they are. They are forever comparing themselves with other schools in the district: the kids, the equipment, the new buildings, the nice neighborhoods. They have none of those things. They don't have pleasant work relations. They

don't have friends on the faculty. They don't have anything that teachers normally want. All that makes them unhappy."

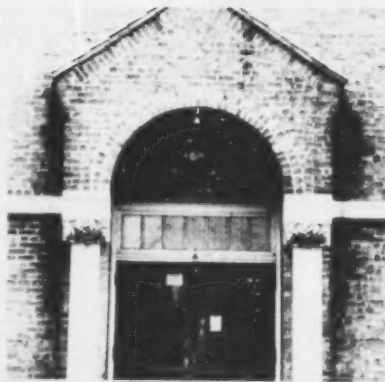
Judy was about to make a cryptic comment, but decided against interrupting Gerald's train of thought.

"But they've got one thing and it makes them happy. No other school in the district has what they have. They don't want to lose it. They reject my help because they are afraid it will ruin the one thing that makes their lot acceptable."

"What could they possibly have that is worth keeping?" Judy thought Gerald was being a bit dramatic. "Come on," she said, "enough mystery, out with it!"

"OK." He was tempted to apologize for his theatrics. "It's simple. They have a mission!"

"A mission? What do you mean, like a church?" Judy couldn't follow him.



Catching her annoyance, he rushed on. "A mission—a higher sense of purpose. It's sort of like this. For them, the best of all worlds is the worst of all worlds. The tougher life becomes in the school, the greater their sense of mission; the greater the odds, the better they like it. If I, or anyone else, would go in there and help them reduce those odds, make life easier for them, it would take away their sense of mission. It would be like I was cheating them out of their life's work."

Judy understood. "That's sick," she said.

"No, it's not sick. It's natural. Look at it this way. Everything that can go

wrong in that school has gone wrong, at least from their point of view. When all the pleasures of teaching are taken away, there is only one neat and clean thing to hold on to—the sense of idealism that got them into teaching in the first place. Their sense of idealism has been aroused to the fullest, they have a mission. It shows in their complaints, which really aren't complaints at all, but socially acceptable ways of reinforcing one another, of heightening their mission. That's all they've got, and I'm the one who might take it away from them."

"Let's suppose you are right," said Judy. "How does that help you?"

"I don't know, right now. But I do know what I am facing. For the first time I think I know what I'm dealing with. That's a big help. Thanks, Judy."

"Anytime," she said, as Gerald swept briskly by her desk and into his office.

A Christmas Reading



It was cold, and so dark that the street lights were still on. A few snowflakes brushed sharply across his face. He shivered. His whole chest felt cold, almost numb. An old car chugged past him. It seemed to make him even colder. He shivered again.

The school was in sight, just past the house where the wind picked up. Warm yellow light was pouring out of the windows, outlining the bells and snowflakes and tinsel on them. Fighting the wind, he pushed himself up the hill toward the warmth, wrapping his jacket around himself.

"Come on, Jimmy. It's cold out there," Mr. Small pulled Jimmy next to him and rubbed his big hands rapidly up and down Jimmy's chest.

"We're going to have to find you a good coat," he said. "You'll freeze in this weather. Run down now and get your breakfast. There's hot cereal, milk and toast. And Mrs. Jackson brought her strawberry jam."

The warmth began to seep in as he headed for the big room. Mr. Small called after him, "Don't forget about the turkey!" Jimmy remembered that this was the last day of school before vacation; there would be turkey at lunch.

The big room was full of children. At the tables the only sound was the clanking of spoons against the bowls. Those who had finished eating were playing tag near the stage.

"Come on, Jimmy," said a woman

dressed in a funny white hat, "get your food. The bell's going to ring in a minute."

The bowl burned his hands as he carried it to the table. "Don't forget your spoon," the woman called after him. The big room was cold, but as he ate he could feel the warmth in his mouth and throat. His stomach seemed to grow round as he sat there.

"OK—time to clean up. The bell's going to ring," Mr. Small was touring around the big room directing the children to take their bowls and spoons away.

The colors along the hallway made him want to skip as he went to class. "So much red," he thought. In his room he found a quiet corner where he could look out the window and down the hill to the highway. The sky was bright all around now. The street lights were still glowing and the snow was swirling about. Jimmy shivered, remembering the cold walk to school.

The room was full of activity. Children were banging on the piano or writing on the blackboard. Others



were playing ball, or just laughing and talking. Out of one group rose Mrs. Thompson, now towering over everyone else. "Get ready for our song," she called out. "Everybody stand up." She sat at the piano looking for all the world like a TV star. She moved her arms up and down, up and down. The children tried to follow, making a housetop with their arms, and then prancing like deer. Holding their tummies they yelled, "Ho, Ho, Ho." They started prancing again. Jimmy liked the piano and the others jumping around.

"OK, start your work," called Mrs. Thompson as she left the piano and headed for the door. A man was standing there, waiting. "Come in, come

in," she called. "See what we are doing."

As Jimmy was getting out his box of crayons, Mrs. Thompson called from across the room. "Jimmy, come here. Show this man what you can do." Without taking a step, it seemed, Jimmy found himself staring into her smiling brown face. The man beside Mrs. Thompson was very tall, bigger even than Mr. Small. He was wearing a red sweater. He looked funny.

"Show this man how you can read. Ready? What is that?"

"D," said Jimmy.

"D, for dog," said Mrs. Thompson.

"B,"

"B, for Bell."

Try as he could, Jimmy could not stop smiling. And Mrs. Thompson and the funny man in the red sweater were smiling, too.

The Courier



The phone was ringing as she unlocked her office door. Outside the sun was just beginning to cut through the morning mist, highlighting the dogwood blossoms outside the window. She hesitated before she picked up the receiver, angry that the beautiful stillness of the morning had been interrupted so rudely.

"Mrs. Trimble?" came a strident voice. "Mrs. Trimble, this is Mrs. Calhoun—you know, Jay's mother."

"Why, sure, Mrs. Calhoun. How is Jay? Is he sick?"

"No, no, Jay's all right." The voice had taken on a shrill tone. "It's your school that's not all right, Mrs. Trimble. Your school." The speaker was

rushing to get the words in. "I read the *Courier* last night. Do you get the *Courier*? Did you read how our children aren't getting good schooling? And do you know why they aren't?" There was no time for Polly Trimble to respond. "It's because of that team teaching you do there. Yes—*team teaching*." The words were repeated with heavy emphasis. "It says so right here in the *Courier*—I can read it to you. 'Study shows school children read at lower levels today than at any time in the last ten years.' So I want to know what you're going to do about it."

"I appreciate your concern, Mrs. Calhoun," Polly said slowly. "And I want to assure you that we're doing the best we can for all our children. Those figures are for the whole country, Mrs. Calhoun. They aren't for Lillum County."



"Well, maybe they aren't. But it says here that teaming isn't good for kids. So I want to know why you are doing it."

"You aren't the only parent who has expressed concern, Mrs. Calhoun. And certainly we want to do what parents want if that's good for children. There's a PTA meeting tomorrow night, and I think the subject of the *Courier* article may come up. Why don't you attend the meeting, and maybe we can discuss this further?"

"Well, Maybe I will. Just maybe I will."

"I'll be looking forward to seeing you. Thank you for calling."

Polly sank into her chair. That hadn't been the first call about the newspaper article, and she knew it wouldn't be the last. There had been other crises like this in the school—when Title I money was brought in, when a physical education program was offered, when ungraded reading was introduced. Somehow Daleville had survived. There had always been enough teachers to stand with her against the pressures of parents. But would it be like that now?

She picked up the phone and dialed. "Carolyn? This is Polly. Are you busy? Can you come down to my office for a few minutes? It's important."

Carolyn was the third grade teacher. She was also Polly's righthand person, always there to share her thoughts, give her encouragement, agree or disagree with her, but always her friend. Carolyn had been in the building





much longer than Polly, and they both knew that without her, Polly could never have accomplished as much as she had in the last four years.

"Carolyn! I'm so glad to see you. Sit down."

"What's the problem, Polly?"

"The *Courier* again. Parents calling, all last night and this morning. We're going to be deluged by this thing, I'm afraid."

"Yes, I read it. Pretty grim stuff, and the statistics always seem to say it so much better than any nice words."

"So you think we're going to have trouble?"

"With this community? You bet. But we can weather it, Polly. You and I and the other Daleville teachers.

We've spent a lot of time and effort building up teaming, and we're all together now. It's going to take more than a *Courier* breeze to blow us over. Here," she said, dropping a stack of papers on Polly's desk. "Here is all the evidence we need for our case. Look at this—and look at these test scores. And there are the case histories of some of our students. And lots more. I knew this thing would break, so I worked up a game plan. Look."

They read silently for several moments.

"I think you're right," said Polly, excitedly. She jumped up. "I think we can do it. Come on." Together they hurried down the hall, intuitively knowing where they had to go and what they had to do.



Chapter 7

A Question of Choice

Today there are more choices among educational goals, teaching strategies, and curricular methods than ever before. Terms such as "individualization," "personalization," "modules," "behavior modification," "performance contracting" and "multi-unit schools" abound. Indeed, there is such an overwhelming array of educational innovations that a current bestseller is simply a guide to the alternatives available to parents, students, and teachers.* While these innovations offer the educator new terminology, it is often unclear whether related educational practice can be distinguished from conventional routines in any fundamental way. Some critics argue that

* See Neil Postman and Charles Wein-gartner, *The School Book: For Those Who Want to Know What the Hollering is All About*, New York: Delacortie Press, 1973.



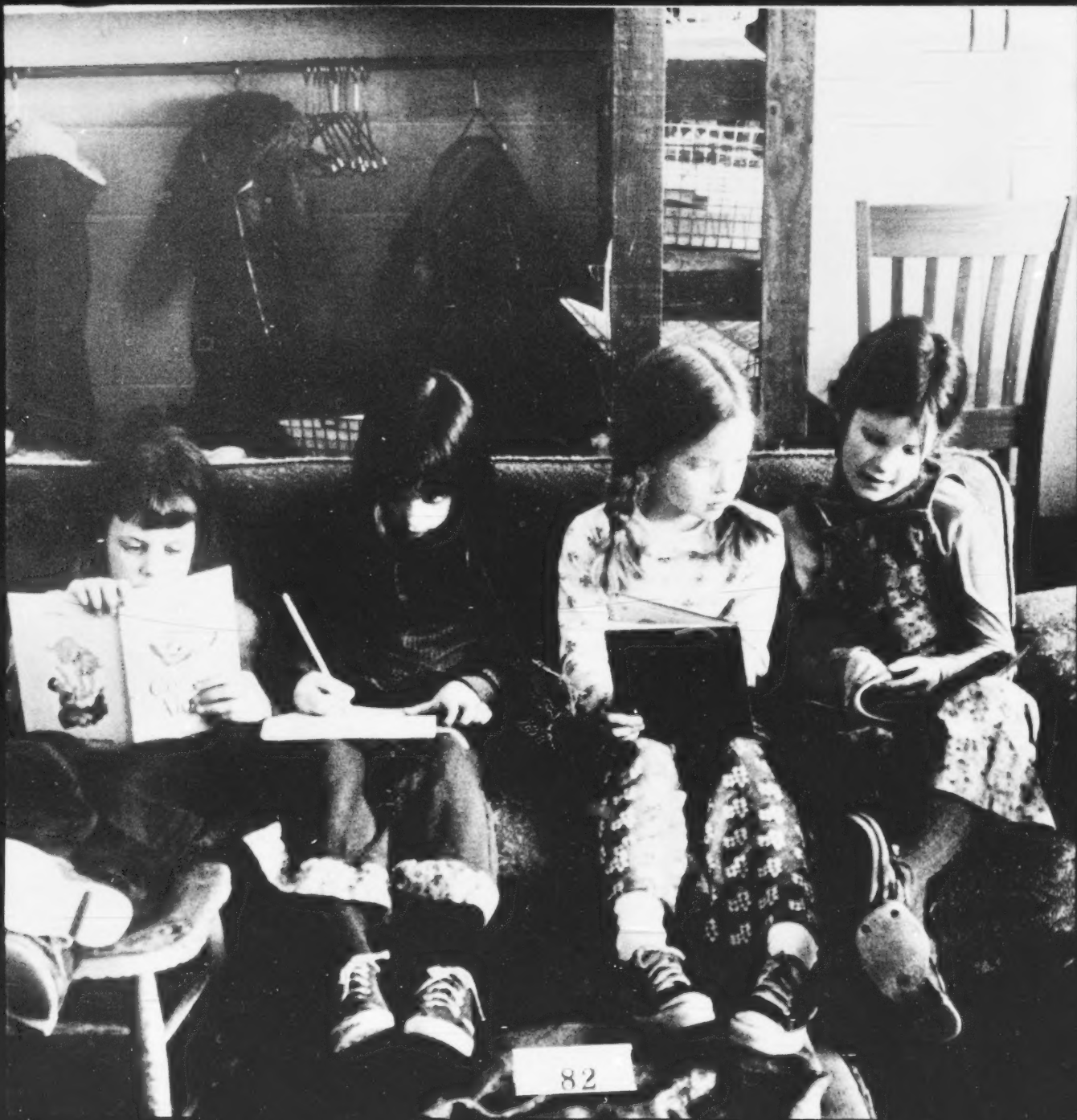
educational innovations are simply new labels for old packages. In short, some claim that despite the number of labels, there seem to be few meaningful choices for schools and educators.

Such criticism has rarely been refuted or substantiated with careful research. Project MITT was launched to discover whether one particular kind of educational choice—the installation of units—does in fact produce measurable changes in the behaviors of teachers and administrators.

Earlier research had indicated that the installation of units led to changes not only in teacher behavior but also in teacher attitudes about teaching. Unit structure was shown to alter patterns of teaching relationships, patterns

of governance and patterns of communication in the elementary school. Unit organization also seemed to make the school a more complex organization. Project MITT is now able to affirm that unit structure is followed by changes in teacher behavior but not in teacher attitudes.

The value of Project MITT for teachers and administrators is that it shows there are *bona fide* choices in education. Our research findings have been generated through the application of a powerful research design and improved measurement techniques. The findings indicate that the choice between a conventional and a unit structure has important implications for teachers as well as for administrators, students and others. Project MITT was not designed to advocate one organizational structure over another. Rather, its goals were to describe the alternatives and to make the choices clear.



Two Alternatives

82

In a conventional elementary school each teacher is given exclusive responsibility for the instruction of a small set of pupils in the basic subjects for the entire school year. The teacher is relatively free to retain this responsibility or share it with others. All teachers have equal status and responsibility. In a unit structure elementary school the teaching faculty is divided into work groups of three to five persons. These are called units or teams. Each unit is assigned a large number of students, and the members have joint responsibility for the instruction of students in the basic subjects for the school year. One member of each unit is designated leader, a novel position in the authority structure of the school.

The Choice for Teachers



If a teacher wants greater collaboration with other faculty members, then he or she should seek a unit school. If, on the other hand, the teacher wants to remain relatively autonomous, then the conventional school is the better choice. Not only do teachers in unit schools have more interdependent teaching relations, but they also make many more decisions together. Furthermore, they are in contact with more of their colleagues with regard to classroom and school-wide issues. As a group, teachers have a greater hand in determining policies that affect their work. If a teacher does not desire these changes, then the conventional school is preferable.

The Choice for Principals

Principals participate in relatively fewer decisions concerning classroom or school affairs in unit than in conventional schools. In a unit school, school policy is more often made in collegial settings. Principals probably transfer greater responsibility for school management to the faculty. Principals in unit schools may also view themselves less as supervisors of instruction and more as facilitators of the teaching process. Because of the logistical complexities of unit schools, principals may know less of the whereabouts and circumstances of every teacher and student. There is anecdotal evidence to suggest that this change in role is enjoyable for many principals; however, such is not always the case. The major choice for a school principal, then, is between sharing greater or lesser responsibility with teachers.

The Choice for Students

While Project MITT did not measure student outcomes, there is evidence that the unit structure creates a different learning environment for students. The difference is manifested in the number and variety of teachers for each child and in teacher work relations. Students come in contact with more teachers in the course of a day or week in unit schools than in conventional schools. Students experience a greater variety of personalities, teaching styles and teacher expectations. In a conventional school the student often encounters a single classroom teacher for days at a time. Their classrooms are probably far less changeable and far more predictable. Students and parents who believe that education is benefited by a greater variety of teachers should seek a unit school. Those who believe that students benefit most from prolonged contact with a single teacher will find the conventional school more appropriate. Many educators feel some students, especially the youngest, are more likely to benefit from a learning environment that includes a single teacher for sustained periods.

The more varied learning environment of the unit school does not happen by accident. The unit organization

has been promoted as one in which individualized instruction can be better implemented. One way to individualize instruction is to increase the variety of teachers with whom a student comes in contact frequently. This change does occur in schools that install units.

The learning environment may be altered also according to relationships among teachers. Where teachers regularly cooperate with one another and actively participate in issues of school governance, they may transfer these skills and attitudes to the classroom. In fact, some theorists suggest that under such conditions, collaborative decision making may be extended to students. If that is true, then these changes are likely to follow the introduction of units. Changes in the learning environment mean students and their parents also are confronted by meaningful choices.

Choice for Policy Makers



Superintendents, school board members and community leaders also have choices available to them. While it is a simple matter to install units in a school, it may exact heavy emotional and organizational costs. The change to a unit structure can prompt some faculty members to leave the school. Additional transfer and replacement costs can arise. Teachers who choose to leave may give the project an unhappy legacy. Moreover, the extra effort required to fit new teachers into a new program may be more than staff members are willing to give. Within units sharp differences of opinion may arise among staff members. The conflicts

can be magnified in the frequent meetings of the small work groups. Secondary school faculty members may feel that the changing patterns of elementary instruction will disrupt their procedures and programs. Other teachers in the district may begrudge the new resources and greater teacher influence in the unit school.

These are not the only potential costs. Change to a unit structure may prompt negative community reaction. Parents are familiar with the conventional school organization. They know which teacher is responsible for their child; they know whom to contact when there are problems. In the unit school, children are the responsibility of many teachers and may be assigned to different teachers for different subjects. Often classes are composed of children from two or more grade levels. Parents may not know as surely where to fix blame or responsibility for their child's progress in the unit school. Even the principal may not be as helpful since teachers exercise greater control over class schedules. Because of these complexities, parents may not understand the unit school. Lack of understanding can lead to reverberations in the community.

Comment

Project MITT carefully developed and installed a powerful research design in order to conduct an objective investigation of an educational innovation. Throughout the study, we have studiously avoided making evaluative judgments about the different types of schools under investigation. The study was not designed to be an evaluation and schools agreed to participate under this condition. In preparing this book, however, the educational perspectives of the authors may have flavored the discussion. After all, we are former teachers, and two of us are parents of school-aged children. We think it appropriate, therefore, to specify some of our pertinent biases lest readers be led to erroneous conclusions by our discussions of the "facts."



We believe frequent, work-related collegial interaction is to be valued. People, we believe, become more thoughtful and reasoned when their ideas and actions pertaining to work and its management are openly tested in peer settings. The general level of expertise in work should be enhanced more by collegial interaction than in settings where work is performed autonomously. Furthermore, we believe that adults find the rewards and the risks of work to be greater when they must perform as competently in the company of professionals as when they are alone or with clients only. We value collegial interaction in our own

work. The unit school promotes collegial interaction.

We also recognize that everyone does not share our beliefs about the benefits of sustained collegial interaction. Some teachers prefer less rather than more contact with their colleagues. Some students may learn better in the conventional school with its more predictable routines. Certain parents and teachers may feel that the responsibility for running the school belongs to administrators, that teachers should teach. For these persons the unit school may carry few benefits.

MITT findings do not indicate that one type of school is better than another. Our findings give clear evidence that the manner in which a school is organized profoundly affects the lives of teachers, students and administrators. If there is one value which we do want to promulgate in this book, it is that educational choices should continue to exist in education, and that people should be informed about these choices. There is a rhetoric in our country which supports pluralism and a respect for individual differences. We find it reassuring to discover that organizational decisions can result in real

and substantial differences among schools.

If the benefits of installing the unit structure seem to outweigh the costs, educators must then pay careful attention to the implementation process if the benefits are to be realized. The purposes for innovation must be clear; teachers must know what will be expected of them; there ought to be a particular curricular focus and provisions made to receive external support on a continuing basis; teachers who are unwilling to remain in the school should be given a reasonable alternative; teachers who stay with the program must be given latitude to experiment with different teaching relationships. Under such conditions, changes in teacher behavior, with concomitant changes in the schooling routines for students, are more likely to occur.

Project Mitt Bibliography

86

Charters, W. W., Jr., *Management Implications of Team Teaching: Sense of Teacher Work Autonomy: Measurement and Findings*, Eugene, Oregon: Center for Educational Policy and Management, University of Oregon, 1976.

Charters, W. W., Jr., *Management Implications of Team Teaching: Task Interdependence Among Teachers: Measurement and Findings*, Eugene, Oregon: Center for Educational Policy and Management, 1976.

Charters, W. W., Jr., "Role Coupling in the School's Work System: Operationalizing Task Interdependence among Teaching Personnel," Working paper prepared for meeting of task group on educational systems as loosely coupled organizations, LaJolla, California, February 2-4, 1975.

Charters, W. W., Jr., "Task Interdependence in Front Line Personnel," in Audrey J. Schwartz, (Ed.), *Proceedings of the Third Annual Conference of the Sociology of Education Association*, Berkeley, California: School of Education, University of California, 47-63, 1975.

Charters, W. W., Jr., "The Myth of the Self-Contained Classroom: Task Interdependence in the Elementary School," Paper presented to the Fourth Annual Conference, Sociology of Education Association, Asilomar, California, February, 1976.

Charters, W. W., Jr., "Work System Change in Unitized Schools: Some Through-Time Findings," Paper prepared for annual meeting of the American Educational Research Association in San Francisco, April, 1976.

Charters, W. W., Jr., and John E. Jones, *On Neglect of the Independent Variable in Program Evaluation*, Project MITT Occasional Paper, Eugene, Oregon: Center for Educational Policy and Management, February, 1974.

Jones, John E., *Management Implications of Team Teaching: Bibliography and Reference Information on Differentiated Staffing*, Eugene, Oregon: Center for Educational Policy and Management, April, 1975.

Jovick, Thomas and Robyn Milich, "Impact of Unitization on the Behavior and Attitudes of Teachers: A

Cross-Sectional Replication of the Meyer and Cohen Study," Paper presented at the annual meeting of the American Educational Research Association in San Francisco, April, 1976.

Mawter, Paul T., *Management Implications of Team Teaching: A Selected and Annotated Bibliography of Research on Team Teaching in Schools*, Eugene, Oregon: Center for Educational Policy and Management, May, 1975.

Packard, John S., "Decision Making Structures in Elementary Schools: A Report of Research," Paper prepared for the State Conference of the Oregon Elementary Schools Association in Eugene, October, 1976.

Packard, John S., *Management Implications of Team Teaching: The Norm of Teacher Autonomy/Equality: Measurement and Findings*, Eugene, Oregon: Center for Educational Policy and Management, University of Oregon, 1976. The paper was presented with the title, "A Questionnaire Method for Measuring the Autonomy/Equality Norm," at the annual meeting of the American Educational Research Association in San Francisco, April, 1976.

Packard, John S., "Principals in Unitized and Non-Unitized Elementary Schools," *The Oregon Elementary Principal*, XXXVI, 3, 1976.

Packard, John S., "Supervision as Administration: The Control Structure of the School," Paper prepared for annual meeting of the American Educational Research Association in San Francisco, April, 1976.

Packard, John S., K. Bierly, J. De-Flaminis, and S. Gaughen, *Project Report No. 3: The Control Structure Interview*, Eugene, Oregon: Center for Educational Policy and Management, University of Oregon, 1973.

Packard, John S., and Richard O. Carlson, *Management Implications of Team Teaching: Control Structure in Elementary Schools: Measurement and Findings*, Eugene, Oregon: Center for Educational Policy and Management, University of Oregon, 1976.

Packard, John S., Richard O. Carlson, W. W. Charters, Jr., and Richard H. Moser, *Management Implications of Team Teaching: Prospectus for Research*, Eugene, Oregon: Center for the Advanced Study of Educational Administration, University of Oregon, 1973.

Packard, John S., Richard O. Carlson, W. W. Charters, Jr., Richard H. Moser and Patricia A. Schmuck, *Management Implications of Team Teaching: Governance and Task Interdependence in Schools: First Report of a Longitudinal Study*, Eugene, Oregon: Center for Educational Policy and Management, University of Oregon, 1976.

Schmuck, Patricia A., John S. Packard, Susan Paddock, *Management Implications of Team Teaching: A Summary Report of Findings*, Eugene, Oregon: Center for Educational Policy and Management, University of Oregon, 1976.

Wolcott, Harry F., *Three P's from a Pod: Impressions of an Open Space Elementary School*, Project MITT Occasional Paper, Eugene, Oregon: Center for Educational Policy and Management, April, 1976.

References

88

The three references below are particularly important for the MITT study. The first two are the studies upon which Project MITT was built. The third is a collection of articles which deal with many facets of team teaching.

Meyer, John and Elizabeth Cohen. *The Impact of the Open-Space School Upon Teacher Influence and Autonomy: The Effects of Organizational Innovation*, Technical Report No. 21. Stanford Center for Research and Development in Teaching, 1971.

The principle interest of this research was in teachers and their surrounding environment. Data from questionnaires and interviews in eight "open-space" schools having formal

team organization were compared with data from seven self-contained schools to develop causal relationships between school type, task related interaction, sources of influence on instructional decisions, sources of influence on school-wide affairs, and teacher job satisfaction. A causal model of linkages among the variables was developed and analyses of second- and third-order relationships were conducted in order to test the postulated linkages. It was found the teaching staffs in the open schools had become work units where teachers talked about and legitimately settled instructional and curricular issues normally of concern only to the principal. These units came to exercise rather broad influence in the schools, especially with regard to matters supportive of classroom instruction and the school's general educational program. As a result, teachers felt they gained autonomy in their own work and expressed greater satisfaction with their job and career. The units permitted leadership roles to emerge and it was primarily among the occupants of those positions that job satisfaction was enhanced.

Pellegrin, Roland J. *Professional Satisfaction and Decision Making in the Multiunit Schools*, Technical Report No. 7, Center for the Advanced Study of Educational Administration, May, 1970.

This report deals with professional satisfaction and decision making in three multiunit team teaching schools and three conventional schools. Detailed questionnaires distributed to all personnel and interviews of the majority of the staff of the multiunit schools provided data for an examination of the shift in the locus of decision making patterns. Tabular display of the data in terms of percentages indicates: a) the emergence of interdependency relationships among classroom teachers in the multiunit schools, b) a shift in the locus of authority for instructional decisions from autonomous classroom teachers to the unit faculties as collegial

groups, c) greater influence attributed to unit leaders, and d) higher rates of professional satisfaction for teachers in the multiunit schools. The author concludes "that the faculty of the multiunit school not only feels a heightened sense of power, but is enthusiastic about the potentialities of group participation in decision making processes."

Shaplin, Judson T. and Henry F. Olds, Jr., eds. *Team Teaching*, Harper & Row, New York, 1964.

This book covers a wide range of topics pertaining to team teaching. It begins with a description and definition of team teaching and a history of the idea, and moves to more specific topics on curriculum, public relations, and administration of team teaching. The difficulties of teaming, as well as the promises, are discussed, and a framework for the analysis of team teaching suggested. Though the book is more than ten years old, it still contains valuable information for both teacher and researcher, and may serve as a springboard for their further inquiry.

A number of articles have been published in the last few years about either the multiunit school or team teaching. Readers interested in more information on teaming should see "A Selected and Annotated Bibliography of Research on Team Teaching in Schools," by Paul T. Mawter. This can be obtained by writing:

Project MITT
Center for Educational Policy
and Management
University of Oregon
1472 Kincaid
Eugene, Oregon 97401

Participating Schools

90

The following schools participated in Project MITT. The list does not include one school which did not give permission for the use of its name in this publication.

Broken Ground Elementary School
Portsmouth Street
Concord, New Hampshire

Main Dunstable Elementary School
Nashua, New Hampshire

Golden Brook Elementary School
Windham, New Hampshire

Wilkins-Clark Elementary School
Amherst, New Hampshire

Conant School
Concord, New Hampshire

Sherburne Elementary School
Pelham, New Hampshire

Arlington School
30 Tenney Street
Lawrence, Massachusetts

F. M. Leahy School
100 Erving Avenue
Lawrence, Massachusetts

Park Street School
150 Park Street
Lawrence, Massachusetts

Bruce School
135 Butler Street
Lawrence, Massachusetts

Park Row School
Mansfield, Massachusetts

Penniman School
71 Cleveland Avenue
Braintree, Massachusetts

Roland Green School
Dean Street
Mansfield, Massachusetts

Donald Ross School
20 Hayward Street
East Braintree, Massachusetts

Our Lady of Mt. Carmel
Pine and First Streets
Asbury Park, New Jersey

St. Catharines School
Second and Salem
Spring Lake, New Jersey

St. Elizabeth School
Seney Drive
Bernardsville, New Jersey

St. Bartholomew School
470 Riders Lane
East Brunswick, New Jersey

St. Rose of Lima
51 Lincoln Place
Freehold, New Jersey

St. Matthias School
170 John F. Kennedy Blvd.
Somerset, New Jersey

Dogwood Elementary School
12300 Glade
Reston, Virginia

Great Falls Elementary School
701 Walker Road
Great Falls, Virginia

South View Elementary School
Roanoke, Virginia

Cave Spring Elementary School
5404 Springlawn Avenue SW
Roanoke, Virginia

Gladeville Elementary School
Route 4
Galax, Virginia

Louise Archer School
324 Nutley Street NW
Vienna, Virginia

Mt. Vernon Woods Elementary
School
4015 Fielding Street
Alexandria, Virginia

Mt. Vernon Elementary School
3738 Mt. Vernon Drive SW
Roanoke, Virginia

Oakland Elementary School
Route 3
Galax, Virginia

Marshall Elementary School
29th and Texas Streets
Fort Campbell, Kentucky

Horse Branch Elementary School
Route #1
Horse Branch, Kentucky

Valley View Elementary School
Hawkins Drive
Elizabethtown, Kentucky

Lincoln Elementary School
Iowa & Polk Road
Fort Campbell, Kentucky

Central Park Elementary School
McHenry, Kentucky

Helmwood Elementary School
Cardinal Drive
Elizabethtown, Kentucky

Clarkson Elementary School
Clarkson, Kentucky

Caneyville Elementary School
P. O. Box 17
Caneyville, Kentucky

Mitt Field Representatives

92



Dennis Hinkle serves as the Field Representative for MITT schools in Virginia. He is a professor at Virginia Polytechnic Institute in Blacksburg, Virginia and has had diverse experiences with team teaching and Individually Guided Education.



John Stefani is the director of Project SPOKE, located in Norton, Massachusetts, a service agency serving several school districts in southeastern Massachusetts. John works with MITT schools in his region.



J. B. Bolin, ESEA Title III Region II, served as Field Representative for Project MITT schools in Kentucky until 1976. His replacement is John Lovell, pictured above. Both men are affiliated with the Title III Center, a Resource Service Center, located at Western Kentucky University in Bowling Green. The Center serves 33 school districts.



Les Bernal is with the Merrimack Education Center, located in Chelmsford, Massachusetts. It serves 21 communities with four program areas: staff development, information delivery, innovative programs, and an educational resource and development center. Les is active in AIGE as well as a MITT Field Representative.



Ron Episcopo is with New Careers in Education. The aim of NCE is the identification of more productive and imaginative avenues of managing existing school resources on the elementary, middle/junior high school levels. Ron assists with Project MITT schools in New Jersey.



Cliff Wing is the director of Project SHARE, non-profit service agency serving seven public school districts in southern New Hampshire. They reach many teachers and students as a regional educational resource and assist as well with Project MITT.



Project MITT Staff

Project MITT Staff in Oregon and on the East Coast have worked together to carry out a research project which gathers valuable information and which returns that information to educators. Gathered in Eugene in August, 1976, were: (Back row) Susan Paddock, John Lovell, Karen Amsden, Tom Jovick, Robyn Milich, Pat Schmuck, Bill Jones; (Front Row) Ron Episcopo, John Packard, John Stefani, Les Bernal, Dennis Hinkle, Dick Carlson, Cliff Wing, Sandy Charters.



97